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THE

Gardeners Dictionary:

Containing the METHODS of
CULTIVATING *and* IMPROVING
THE
Kitchen, Fruit *and* Flower Garden,
AS ALSO THE
Phyſick Garden, Wilderneſs, Conſervatory,
AND
VINEYARD.

Abridg'd *from the* FOLIO EDITION,
By the AUTHOR, *PHILIP MILLER,*
Gardener to the Worſhipful *Company of Apothecaries*, at
their BOTANICK-GARDEN, in *Chelſea*, and F. R. S.

In TWO VOLUMES.

> ——*Digna manet divini gloria ruris.*
> VIRG. GEO.

VOL. II.

LONDON:
Printed for the AUTHOR, and Sold by C. RIVINGTON,
at the *Bible* and *Crown*, in St. *Paul's Church-Yard.*
M.DCC.XXXV.

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THE
Gardeners Dictionary.

VOL. II.

KALI; Glaſs-wort.

This is a Plant which grows very common in ſalt Marſhes near the Sea, but is never cultivated in Gardens. The Aſhes of this Plant are uſed in the Making of Glaſs.

KETMIA; *Althæa frutex, vulgò.*

The *Characters* are;

The Flower is compos'd of one intire Leaf, which expands in the Form of thoſe of the common Mallow: *The Fruit is oblong, and divided into ſeveral Cells, in each of which are contain'd ſeveral roundiſh Seeds.*

The *Species* are;

1. Ketmia; *Syrorum, quibuſdam. C. B. Althæa frutex* with red Flowers.

2. Ketmia; *Syrorum, flore purpuro-violaceo. Tourn. Althæa frutex* with purple Flowers.

3. Ketmia; *Syrorum, flore albo. Boerh. Ind. Althæa frutex* with white Flowers.

4. Ketmia; *Syrorum, floribus ex albo & rubro variis. Tourn. Althæa frutex* with ſtrip'd Flowers.

5. Ketmia; *Syrorum, foliis ex albo eleganter variegatis. Cat. Plant. Hort. Lond. Althæa frutex* with ſtrip'd Leaves.

6. Ketmia; *Sinenſis, fructu ſubrotundo, flore ſimplici. Tourn.* China Roſe; *vulgò.*

7. Ketmia; *Sinenſis, fructu ſubrotundo, flore pleno. Tourn.* Double China Roſe, *commonly call'd in the Weſt-Indies,* Martinico Roſe.

8. Ketmia; *Virginienſis, folio inferiori ulmi, ſuperiori aceris. Boerh. Ind.* Virginian *Ketmia* with under-Leaves like the *Elm,* and upper-Leaves like *Maple.*

9. Ketmia; *Carolinienſis, folio Ribeſii, flore amplo, flaveſcente, fundo purpureo.* Carolina *Ketmia* with

Currant Leaves, and an ample yellowiſh Flower with a purple Bottom.

10. KETMIA; *Carolinienſis, folio oblongo, magis acuminato flore amplo, purpureo.* Carolina *Ketmia* with a long ſharp-pointed Leaf, and an ample purple Flower.

11. KETMIA; *Americana, folio papayæ, flore magno flaveſcente, fundo purpureo, fructu erecto, pyramidali, hexagono, ſemine rotundulo, ſapore fatuo. Boerh. Ind.* American *Ketmia* with a papaw Leaf, and a large yellowiſh Flower with a purple Bottom, an hexagonal pyramidal Pod growing upright, and roundiſh Seeds.

12. KETMIA; *Indica, vitis folio ampliore. Tourn.* Indian *Ketmia* with an ample Vine Leaf.

13. KETMIA; *Ægyptiaca, ſemine moſchato. Tourn.* Egyptian *Ketmia* with Seeds ſmelling like Musk, *commonly call'd, in the Weſt-Indies,* Musk-Seed.

14. KETMIA; *Indica, aculeata, foliis digitatis. Tourn.* Indian *Ketmia* with rough-finger'd Leaves.

15. KETMIA; *Indica, Goſſypii folio, acetoſæ ſapore. Tourn. Capſulâ ſeminalis rubra.* Indian *Ketmia* with a Cotton Leaf, whoſe Fruit taſtes like Sorrel, *commonly call'd, in the Weſt-Indies,* Indian or Red Sorrel.

16. KETMIA; *Indica, Goſſypii folio, acetoſæ ſapore, capſulâ ſeminalis albida.* Indian *Ketmia* with a Cotton Leaf, and a whitiſh Seed-veſſel, taſting like Sorrel, *commonly call'd,* White Sorrel.

17. KETMIA; *Braſilienſis, folio ficus, fructu pyramidato, ſulcato. Tourn.* Braſil *Ketmia* with a Fig-leaf, and a pyramidal furrow'd Fruit, *commonly call'd, in the Weſt-Indies,* Okra.

18. KETMIA; *Indica, folio ficus, fructu pentagono, recurvo, eſculento graciliore & longiore.* India *Ketmia* with a Fig-Leaf, and a five-corner'd, long, ſlender, eatable Fruit, recurv'd at the Top, *commonly call'd, in the Weſt-Indies,* Long Okra.

19. KETMIA; *veſicaria vulgaris. Tourn.* Venice Mallow, *or* Bladder *Ketmia.*

20. KETMIA; *veſicaria, Africana. Tourn.* African Bladder *Ketmia.*

21. KETMIA; *Africana, veſicaria, foliis profundius inciſis, vix crenatis. Boerh. Ind.* African Bladder *Ketmia* with deeply-cut Leaves.

The five firſt Sorts are very hardy Shrubs, growing to the Height of ſeven or eight Feet, and may be train'd up to regular Heads: Theſe are very great Ornaments in ſmall Wilderneſs Quarters, when regularly diſpos'd amongſt Plants of the ſame Growth. They produce their Flowers in *Auguſt*; and, if the *Autumn* proves favourable, their Seeds will be ripe ſoon after *Michaelmas*. Theſe are commonly ſold by the Nurſery-men, with other flowering Shrubs, under the Name of *Althæa frutex*: but by the modern Botaniſts they are remov'd from that Genus, and call'd by the Name of *Ketmia*, becauſe their Seeds are produc'd in Veſſels; whereas thoſe of *Althæa* grow in Form of Cheeſes, in the ſame Manner as thoſe of the common *Mallow*.

Theſe Plants are propagated by Seeds, which ſhould be ſown upon a Bed of rich light Earth in *February* or *March*: And when they come up, they ſhould be conſtantly clear'd from Weeds; and in dry Weather often refreſh'd with Water, which will forward their Growth. In theſe Beds they ſhould remain until the ſucceeding *Spring*, when, in *March*, they muſt be carefully tranſplanted into Beds of the like Soil, at about ten Inches ſquare each way, obſerving to water them in dry Weather, as alſo to keep them clear from Weeds: In theſe Beds they may continue two Years, by which Time they will ſpread ſo as to meet each other; therefore you muſt in *March* remove them either into the Places where they are deſign'd to remain, or into a Nurſery, allowing them three Feet Diſtance Row from Row, and eighteen Inches aſunder in the Rows; being careful, in taking them up, not to break or bruiſe their Roots, which would endanger their Growing; and in dry Weather give them ſome Water until they have taken Root; and lay ſome Mulch upon the Surface of the Ground, to prevent its drying too faſt, and be careful to cut down the Weeds between them.

Theſe Plants may alſo be propagated by Layers, or Suckers taken from the Roots of old Trees. But the latter Method is by no Means adviſeable; becauſe the Plants rais'd that way are ſeldom ſo well rooted, and are very ſubject to produce Suckers, whereby the Shrubs are render'd unſightly.

The former Method may be practis'd, in order to preſerve the particular Kinds: but as they are ſo eaſily propagated by Seeds, which generally produce the handſomeſt Plants, and there will be a Chance to obtain different colour'd Flowers that Way, ſo it is generally preferr'd to any other Method. They will alſo take by Inarching, whereby the ſeveral colour'd Flowers may be obtain'd upon one and the ſame Tree; and by this Method, that Sort with variegated Leaves may be increaſed. Theſe Shrubs require very little Culture, but only to clear them from Weeds, and to dig the Ground about them every *Spring*; and if there are any decay'd Branches, they may be at that Time cut out; but they will not require any other Pruning.

The ſixth and ſeventh Sorts are tender, coming from a warmer Country: Theſe may be propagated by Seeds, which ſhould be ſown on a Hot-bed in the Spring; and when they are come up, they ſhould be tranſplanted into another moderate Hot-bed to bring them forward: After which, they muſt be planted into Pots fill'd with freſh light Earth, and plung'd into a Hot-bed, to encourage their Rooting; and in *June* they may be expos'd to the open Air in ſome Place where they may be defended from ſtrong Winds: but they muſt be hous'd early in *Autumn*, when they ſhould be plac'd in a warm Green-houſe, where they will endure the Winter very well without any artificial Warmth: Tho' indeed they will make but very little Progreſs in this Management, nor will they ever produce Flowers, unleſs they are in the ſucceeding *Spring* plac'd into a moderate Bark-bed in the Stove, where they will thrive exceedingly: And if a due Proportion of Air be given to them, that they may not draw up too faſt, they will produce Flowers in the *Autumn*; but unleſs they have the Aſſiſtance of a Fire, they will ſcarcely ripen their Seeds in *England*.

Theſe Plants were originally brought from *China*, where they are greatly admir'd, not only for their Beauty, but alſo for an odd Circumſtance in their Flowers, which is, their changing Colour at different Times of the ſame Day; in the Morning they are White, at Noon they are Red, and in the Evening Purple. Theſe Flowers are in Shape ſomewhat like the *Holihock*, but ſeem to be of ſhort Duration: The Double being much preferable to the Single, the Seeds of that ſhould be conſtantly ſow'd; for amongſt the Plants produc'd from Seeds of the Double, there will always be Single Flowers produc'd; as is the Caſe of all Double Flowers which produce Seeds. They are known in the *Weſt-Indies*, where they are now in great Plenty, by the Name of *Martinico Roſe*; I ſuppoſe, becauſe the Inhabitants of that Iſland firſt procur'd the Seeds; and from thence they have ſince been ſpread into moſt of the other Iſlands.

The eighth, ninth, and tenth Sorts are Perennial Plants, which die to the Surface every *Winter*, and riſe again the ſucceeding *Spring:* They commonly produce their beautiful Flowers late in *Autumn*, but rarely perfect Seeds in our Climate. They are propagated by Seeds, which are eaſily procur'd from *Virginia* or *Carolina*, where they are in great Plenty. The Seeds ſhould be ſown in *March* upon a moderate Hot-bed; and when the Plants come up, they ſhould be removed into ſmall Pots fill'd with light rich Earth, and plung'd into another Hot-bed, to bring them forward: And in the Month of *June* they may be expos'd to the open Air, in a well-ſhelter'd Situation, where they may remain until *October*, when they muſt be remov'd into Shelter for the Winter-ſeaſon: During which Time they will require no farther Care than to be protected from ſevere Froſts; ſo that if they are plac'd into a Hot-bed Frame, where they may be expos'd to the open Air in mild Weather, and only cover'd in Froſts, they will do better than when they are plac'd into the Green-houſe.

In the *Spring* they may be turn'd out of the Pots, and planted into the full Ground, under a warm Wall or Pale, where they will thrive much better than in Pots, and will produce their Flowers much larger, and in greater Quantities: Tho' if you would obtain Seeds from them, the only Method is, to keep one of each Sort in Pots, which ſhould be plung'd into a very moderate Bark-bed in the Stove, giving them a great Share of Air; in which Place they will flower in *June*, and produce ripe Seeds in *Autumn*.

The 11th, 12th, 13th, 14th, 15th, 16th, 17th and 18th Sorts, are much tenderer than any of the former: Theſe are all propagated by Seeds, which muſt be ſown on a Hot-bed early in the *Spring*; and when the Plants are come up, they ſhould be each of 'em tranſplanted into a ſeparate ſmall Pot fill'd with light freſh Earth, and plung'd on a freſh Hot-bed, where they ſhould be frequently water'd, and in warm Weather the Glaſſes ſhould be rais'd with Bricks, to admit freſh Air to them, which will prevent their drawing up weak; and when their Roots have fill'd the ſmall Pots, they ſhould be ſhaken out of 'em, and put into larger, and remov'd to a third Hot-bed, where they may remain until they are grown up to touch the Glaſſes; obſerving (as was before directed) to give them Water frequently, as alſo a large Share of Air in warm Weather; then you ſhould put them into larger Pots, and remove 'em into the Stove, where they will produce their Flowers in *July*, and in *Auguſt* their Seeds will ripen: But except they are thus manag'd, they will rarely produce either Seeds or Flowers in our Climate; tho' they may be kept alive in the Summer, if planted in the full Ground.

Theſe Plants, tho' they may produce Seeds the firſt Year, yet may they be continu'd two or three Years, if preſerv'd in a moderate Stove in Winter, and frequently refreſh'd with Water: yet ſince they are eaſily rais'd from Seeds, and young Plants are much more ſightly than the old ones; it is hardly worth while to fill a Stove with them, ſince there are ſo many other Sorts that will not flower or ſeed the firſt Year, which will take up all the Room there in Winter.

The Flowers of theſe Plants are very beautiful, but are of ſhort Duration, ſeldom continuing longer than one Day; but they are ſucceeded by freſh Flowers, if the Plants are ſtrong and healthy, otherwiſe there is little Pleaſure in them in our Country: but in the *Weſt-Indies*, where they grow in great Plenty, and often ariſe to the Height of a Shrub, they are more productive of Flowers, and are in great Eſteem amongſt the Inhabitants of thoſe Countries.

The thirteenth Sort is by ſome People valu'd for the exceeding Sweetneſs of its Seeds; as are the fifteenth and ſixteenth Sorts for their Seed-veſſels, the Juice of which the People of *Barbados*, *Jamaica*, &c. make uſe of, to add a pleaſant Tartneſs to their Viands. And the Pods of the ſeventeenth and eighteenth Sorts are by them put into their Soups to thicken them. For all which Purpoſes theſe Plants are much cultivated in thoſe Countries; but with us they are preſerv'd only as Curioſities.

The nineteenth, twentieth, and twenty-firſt Sorts, are annual Plants, which are propagated by ſowing their Seeds in *March*, in the Places where they are deſign'd to remain; for they generally form downright Woody Roots, and ſeldom ſucceed well if tranſplanted, except it be done while the Plants are very young: They delight in a freſh light Soil, and an open Situation: for if they are over-ſhaded with Trees, they never thrive well, nor produce ſo great a Number of Flowers.

They are very proper Ornaments for the Borders of Pleaſure-Gardens, where, being intermix'd with other annual Plants, they make an agreeable Variety, and are very hardy, requiring no other Culture than only to ſow their Seeds, and keep them conſtantly clear from Weeds. They produce their Flowers in *June* and *July*, and their Seeds are perfected ſoon after; and tho' their Flowers are of ſhort Duration, ſeldom continuing open above half a Day (which occaſion'd *Gerard* in his *Herbal*, to call them *Flowers of an Hour*;) yet they are every Day ſucceeded by freſh Flowers until the Froſt prevents them.

KITCHEN-GARDEN: The *Kitchen-Garden* ſhould always be ſituated on one Side of the Houſe, ſo as not to appear in Sight, but muſt be plac'd near the Stables for the Conveniency of Dung; which ought always to be conſider'd in the Diſpoſition of the Buildings, and the laying out of the Garden: for if this Garden be plac'd at a great Diſtance from the Stables, the Labour will be very great in wheeling the Dung, and ſuch Expences ſhould ever be avoided, if poſſible.

As to the Figure of the Ground, that is of no great Moment, ſince in the Diſtribution of the Quarters all Irregularities may be hid, though, if you are at full Liberty, an exact Square is preferable to any other Figure.

The great Thing to be conſider'd, is, to make Choice of a good Soil, not too wet, nor over dry, but of a middling Nature; nor ſhould it be too ſtrong or ſtubborn, but of a pliable Nature, and eaſy to work: And if the Place where you intend to make the *Kitchen-Garden* ſhould not be level, but high in one Part and low in another, I would by no means adviſe the levelling it; for by this Situation you will have an Advantage which could not be obtain'd on a perfect Level, which is, the having one Part of dry Ground for early Crops, and the low Part for late Crops, whereby the Kitchen may be the better ſupply'd throughout the Seaſon with the various Sorts of Herbs, Roots, *&c.* And in very dry Seaſons, when in the upper Part of the Garden the Crops will greatly ſuffer with Drought, then the lower part will ſucceed, and ſo *vice verſa*; but I would by no means direct the chooſing a very low moiſt Part of Ground for this Purpoſe, for although in ſuch Soils Garden-herbs are commonly more vigorous and large in the Summer-ſeaſon, yet they are ſeldom ſo well taſted or wholſome as thoſe which grow upon a moderate Soil: and eſpecially ſince in this Garden your choice Fruits ſhould be planted, ſo it would be wrong to have a very wet Soil.

This Garden ſhould be fully expos'd to the Sun, and by no means overſhadow'd with Trees, Buildings, *&c.* which are very injurious to your Kitchen-Plants and Fruit-Trees; but if it be defended from the North Wind by a diſtant Plantation, it will greatly preſerve your early Crops in the Spring; as alſo from the ſtrong South-Weſt Winds, which are very hurtful in Autumn to Fruit and Garden-herbs.

The Quantity of Ground neceſſary for a *Kitchen-Garden* muſt be proportion'd to the Largeneſs of the Family, or the Quantity of Herbs deſir'd: For a ſmall Family, one Acre of Ground may be ſufficient; But for a large Family, there ſhould not be leſs than three or four Acres, becauſe when the Ground is regularly laid out, and planted with Eſpaliers of Fruit-Trees, as will hereafter be directed, this Quantity will be found little enough, notwithſtanding what ſome Perſons have ſaid on this Head.

This Ground muſt be walled round, and if it can be conveniently contriv'd ſo as to plant both Sides of the Walls, it will be a great Addition to the Quantity of Wall-Fruit. Theſe Walls ſhould be built about twelve Feet high, which will be a ſufficient Height for any Sort of Fruit. If the Soil where you intend to place your *Kitchen-Garden* be very ſtrong, then you ſhould plow or dig it three or four times before you plant any thing therein; and if you throw it up in Ridges to receive the Froſt in Winter, it will be of great Service to meliorate and looſen its Parts.

The Manure which is moſt proper for ſuch Soils, is Sea-coal

Aſhes, and the Cleanſing of Streets or Ditches, which will render it light much ſooner than any other Dung or Manure, and the greater the Quantity of Aſhes, the better, eſpecially if the Ground be cold; and where theſe Aſhes are not to be obtain'd in Plenty, Sea-ſand is very proper, or rotten Wood; or the Parts of Vegetables rotted is very good; all which will greatly looſen the Soil, and cauſe it to be not only eaſier to work, but alſo more advantageous for the Growth of Plants.

But, on the contrary, if your Soil be light and warm, you ſhould manure it with rotten Neats-Dung, which is much preferable to any other for hot Soils; but if you uſe Horſe-Dung, it muſt be well rotted, otherwiſe it will burn up the Crops upon the firſt hot dry Weather.

The Soil of this Garden ſhould be at leaſt two Feet deep (but if deeper, it will be ſtill better) otherwiſe there will not be Depth enough for many Sorts of eſculent Roots, as *Carrots, Parſnips, Beets,* &c. which run down pretty deep in the Ground, and moſt other Sorts of eſculent Plants delight in a deep Soil.

You ſhould alſo endeavour to have a Supply of Water in the different Parts of this Garden, which, if poſſible, ſhould be contain'd in large *Baſons* or *Reſervoirs,* where it may be expos'd to the open Air and Sun, that it may be ſoften'd thereby; for ſuch Water as is taken out of Wells, *&c.* juſt as it is uſed, is by no means proper for any Sort of Plants.

In the Diſtribution of this Garden, after having built the Walls, you ſhould lay out Banks or Borders under them, which ſhould be at leaſt ten Feet broad, whereby the Roots of the Fruit-Trees will have greater Liberty than in ſuch Places where the Borders are not above three or four Feet wide; and upon theſe Banks you may ſow many Sorts of early Crops, if expos'd to the South; and upon thoſe expos'd to the North, you may have ſome late Crops; but I would by no means adviſe the planting any Sort of deep-rooting Plants too near the Fruit-Trees; but rather to have ſome Reed Hedges fix'd in ſome of the warmeſt Quarters, under which you ſhould ſow and plant early *Peas, Beans,* &c. where they will thrive as well as if planted under a Wall, and hereby your Fruit-Trees will be intirely freed from ſuch troubleſome Plants.

Then you ſhould proceed to dividing the Ground out into Quarters, which muſt be proportion'd to the Largeneſs of the Garden; but I would adviſe never to make them too ſmall, whereby your Ground will be loſt in Walks, and the Quarters being inclos'd by Eſpaliers of Fruit-Trees, the Plants therein will draw up ſlender, and never arrive to half the Size as they would do in a more open Expoſure.

The Walks of this Garden ſhould be alſo proportion'd to the Size of the Ground, which in a ſmall Garden ſhould be ſix Feet, but in a large one ten; and on each Side of the Walk ſhould be allow'd a Border three or four Feet wide between the Eſpalier and the Walk, whereby the Diſtance between the Eſpaliers will be greater, and the Borders being kept conſtantly work'd and manur'd, will be of great Advantage to the Roots of the Trees: And in theſe Borders may be ſown ſome ſmall Sallet, or any other Herbs, which do not continue long, or root too deep, ſo that the Ground will not be loſt.

But the Walks of theſe Gardens ſhould not be gravell'd; for as there will conſtantly be occaſion to wheel Manure, Water, *&c.* upon them, ſo they would ſoon be defac'd and render'd unſightly; nor ſhould they be laid with Turf, for Green Walks would abſorb the Rays of Light too much, and thereby cauſe the Fruit to be ill-taſted: But on the contrary, only level the Surface of the Walks; and if you have either Lime-Rubbiſh, or Sand juſt to cover over the Tops of them, to render them drier or fitter to walk on than the natural Soil, they will be much preferable to any other Sort of Walks.

The beſt Figure for the Quarters to be diſpos'd into, is a Square or an Oblong, where the Ground is adapted to ſuch a Figure; otherwiſe they may be triangular, or of any other Shape which will be moſt advantageous to the Ground.

Theſe Quarters ſhould be conſtantly kept clear from Weeds; and when any Part of the Ground is unoccupied, it ſhould always be trench'd up into Ridges, that it may ſweeten and imbibe the nitrous Particles of the Air, which is of great Advantage to all Sorts of Land, and the Ground will then be ready to lay down whenever it is wanted.

The Ground in theſe Quarters ſhould not be ſown or planted with the ſame Crop two Years together, but the Crops ſhould be annually chang'd, whereby they will prove much better than when they conſtantly grow upon the ſame Spot: Indeed the *Kitchen-Gardeners* near *London*, where Land is dear, are often oblig'd to put the ſame Crop upon the Ground for two or three Years together; but then they dig and manure their Land ſo well every Year, as to render it almoſt new; tho' notwithſtanding all this, it is conſtantly obſerv'd, that freſh Land always produces the beſt Crops.

In one of theſe Quarters, which is ſituated neareſt to the Stables, and beſt defended from the cold Winds, ſhould be the Place where you raiſe your early *Cucumbers* and *Melons*; for which Purpoſe 'twill be very proper to ſurround that Part with a Reed-Hedge, which will hide the Beds from Sight, and preſerve them from Winds: The Size of this Place ſhould alſo be proportion'd to the Quantity of Beds intended, but it ſhould be large enough to contain two Years Beds, or elſe you ſhould have two of theſe Places, that you may every Year change them, which will be found of great Advantage to your Plants: But if your Garden be too ſmall to admit of this, then you ſhould always prepare a ſufficient Quantity of freſh Earth for theſe Beds, otherwiſe they will not ſucceed well.

The moſt important Points of general Culture conſiſt in well digging and manuring the Soil, and giving a proper Diſtance to each Plant according to their different Growths (which is conſtantly exhibited in their ſeveral Articles in this Book) as alſo to keep them clear from Weeds; for if Weeds are permitted to grow until their Seeds are ripe, they will ſhed upon the Ground, and fill it ſo as not to be gotten out again in ſeveral Years: You ſhould alſo obſerve to keep your Dung-hills always clear from Weeds, for it will be to little Purpoſe to keep the Garden clean, if this is not obſerv'd; for the Seeds falling amongſt the Dung will be brought into the Garden, whereby there will be a conſtant Supply of Weeds yearly introduc'd, to the no ſmall Damage of your Plants, and a perpetual Labour occaſion'd to extirpate them again. As for all other neceſſary Directions, they will be found in the Articles of the ſeveral Sorts of Kitchen-Garden Plants, which renders it needleſs to be repeated in this Place.

KNIGHT's CROSS, *or* SCARLET CROSS *is the* Scarlet Lychnis; *vide* Lychnis.

L A

LABLAB; *vide* Phaſeolus.

LABRUM VENERIS; *vide* Dipſacus.

LABRUSCA; *vide* Vitis.

LABURNUM; *vide* Cytiſſus.

LACHRYMA JOBI; Job's Tears.

The *Characters* are;

It hath the whole Habit of a Reed; the Male Flowers (which have no Petals) are produc'd in a Spike on different Parts from the Female of the ſame Plant; the Ovary is a long Tube with two Horns, which becomes a hard, ſtrong Fruit, containing one Seed.

This is a Sort of Corn which is often cultivated in *Portugal, Italy,* and ſome other warm Countries, where they ſtring the Seeds (which are very ſmooth, and of a bright Aſh-colour) for Beads; and in ſcarce Years of other Grain, I have been inform'd, the poorer Sort of People make Bread of it, but I do not find it is any where cultivated for that Purpoſe; the natural Place of its Growth is in *Candia*, and the other Iſlands of the *Archipelago*.

It is ſeldom cultivated in *England*, unleſs by way of Curioſity; and rarely produces ripe Seeds with us, except in very warm Seaſons: The Seeds of this Plant ſhould be ſown upon a light Soil and in a warm Situation early in the Spring; and when the Plants are come up, they muſt be carefully tranſplanted to the Diſtance of ten Inches or a Foot each way, obſerving to water them until they have taken new Root; after which they will require no other Culture than to clear them from Weeds, and if the Seaſon proves warm, they will perfect their Seeds in Autumn.

LACTUCA. Lettuce.

The *Characters* are;

It hath a fibroſe Root, which is, for the moſt part, annual: The Leaves are ſmooth, and grow alternately upon the Branches, the Stalks are, for the moſt part, ſlender, and ſtiff, and do commonly terminate into a ſort of Umbel; the Cup of the Flower is oblong, ſlender, and ſcaly; the Seeds are oblong, depreſs'd, and generally terminate in a Point.

It would be beſide my Purpoſe to mention in this Place the ſeveral Sorts of *Lettuce* that are to be found in Botanick Writers, many of which are Plants of no Uſe, and are never cultivated but in Botanick Gardens for Variety, and ſome of them are found wild in many Parts of *England*; I ſhall therefore paſs over thoſe here, and only mention the ſeveral Sorts which are cultivated in the Kitchen-Garden for Uſe:

1. *Common* or *Garden Lettuce.* 2. *Cabbage Lettuce.* 3. *Sileſia Lettuce.* 4. *Dutch Brown Lettuce.* 5. *Aleppo Lettuce.* 6. *Imperial Lettuce.* 7. *Green Capuchin Lettuce,* 8. *Verſailles* or *Upright White Cos Lettuce.* 9. *Black Cos.* 10. *White Cos.* 11. *Red Capuchin Lettuce.* 12. *Roman Lettuce.* 13. *Prince Lettuce.* 14. *Royal Lettuce.*

The firſt of theſe Sorts is commonly ſown in the Winter and Spring, for cutting very young, to mix with other ſmall Sallet Herbs, and is only different from the ſecond Sort, in being a Degeneracy therefrom, or otherwiſe the ſecond is an Improvement by frequent Cultivation from the firſt; for if the Seeds are ſaved from ſuch Plants of the ſecond Sort as did not cabbage cloſely, the Plants produc'd from that Seed will all degenerate to the firſt Sort, which is by the Gardeners call'd *Laped Lettuce,* to diſtinguiſh it from the other, which they call *Cabbage Lettuce.* The Seeds of the firſt, which are commonly ſav'd from any of the Plants, without having Regard to their Goodneſs, are generally ſold at a very cheap Rate, (eſpecially in dry Seaſons, when theſe Plants always produce the greateſt Quantity of Seeds); tho' ſometimes this Seed is ſold in the Seed-ſhops, and by Perſons who make a Trade of ſelling Seeds, for the *Cabbage Lettuce,* which is often the Occaſion of Peoples being diſappointed in their Crop: So that this Sort ſhould never be cultivated but to be cut up very young, for which Purpoſe this is the only good Sort, and may be ſown any Time of the Year, obſerving only in hot Weather to ſow it on ſhady Borders, and in the Spring and Autumn upon warm Borders; but in Winter it ſhould be ſown under Glaſſes, otherwiſe it is ſubject to be deſtroy'd by ſevere Froſts.

The *Cabbage Lettuce* may alſo be ſown at different Times of the Year, in order to have a Continuation of it thro' the whole Seaſon; the firſt Crop is generally ſown in *February,* which ſhould be upon an open warm Spot of Ground, and when the Plants are come up, they ſhould be thin'd out, to the Diſtance of ten Inches each Way, which may be done by hoeing them out, as is practis'd for *Turnips, Carrots, Onions,* &c. provided you have no Occaſion for the ſuperfluous Plants, otherwiſe they may be drawn up and tranſplanted into another Spot of good Ground at the ſame Diſtance, which if done before the Plants are too large, they will ſucceed very well, though they will not be ſo large as thoſe which were left upon the Spot where they were ſown; but they will come ſomewhat later, which will be of Service, where People do not continue ſowing every Month.

You muſt alſo obſerve in ſowing the ſucceeding Crops, as the Seaſon advances, to chuſe a ſhady moiſt Situation; but not under the Drip of Trees, otherwiſe in the Heat of Summer, they will run up to Seed before they cabbage: In the beginning of *Auguſt,* you ſhould ſow the laſt Crop, which is to ſtand over Winter, and ſhould be ſown thin, upon a good light Soil, in a warm Situation, and when the Plants are come up, they muſt be hoed out ſo as to ſtand ſingly, and cut down all the Weeds to clear them; and the Beginning of *October* they ſhould be tranſplanted into warm Borders, where, if the Winter is not very ſevere, they will ſtand very well; but in order to be ſure of a Crop, it will be adviſeable to plant a few upon a Bed pretty cloſe, where they may be arched over with Hoops, and in ſevere Froſts they ſhould be cover'd with Mats and Straw, or Peaſe-haulm, to ſecure them from being deſtroy'd, and in the Spring of the Year they may be tranſplanted out into a warm rich Soil, at the Diſtance before-mention'd; but ſtill thoſe which grew under the Wall, if they eſcaped the Winter, and were ſuffer'd to remain, will cabbage ſooner than thoſe which are remov'd, but you muſt obſerve not to place them too cloſe to the Wall, which would occaſion their growing up tall, and prevent their being large or hard.

In order to ſave good Seeds of this Kind, you ſhould look over your *Lettuces* when they are in Perfection, and ſuch of them as are very hard and grow low, ſhould have Sticks thruſt into the Ground, by the Sides of as many of them as you intend for Seed, to mark them from the reſt, and you ſhould carefully pull up all the reſt from amongſt them as ſoon as they begin to run up, if any happen to be left, leſt by intermixing with the good ones, the Seeds may degenerate.

It may be ſome Perſons may object, that ſuppoſe ſome bad ones ſhould happen to be left among them (for Seeds to ſow for ſmall Sallets) yet the good ones being mark'd, the Seeds need not be mix'd, and ſo no Danger can enſue from thence; but notwithſtanding ever ſo much Care being taken to keep the Seeds ſeparate, yet, whether from the intermixing of the *Farina* during the Time of their being in Flower, or what other Cauſe, I can't ſay, but it hath been often obſerv'd, that where good and bad Plants have ſeeded upon the ſame Spot, the Seeds of the good Plants which were carefully ſaved ſeparately, have very much degenerated, and proved worſe than ſuch as have ſeeded by themſelves: The Seeds ſhould always be ſaved either from thoſe which ſtood through the Winter, or thoſe which were ſown early in the Spring, for the late ones very ſeldom perfect their Seeds.

The *Sileſia, Imperial, Royal, Black, White* and *Upright Cos Lettuces* may be ſown at the following Times: The firſt Seaſon for ſowing theſe Seeds, is at the latter End of *February*, or the Beginning of *March*, upon a warm light Soil, and an open Situation, *i. e.* not over-ſhadowed with Trees, and when the Plants are come up, they ſhould be either hoed out or tranſplanted into another Spot of Ground, (as was directed for the *Cabbage Lettuce*) obſerving to leave theſe Sorts fifteen or ſixteen Inches apart each Way, which will be full near enough for theſe Plants, eſpecially if the Soil be good, and you muſt carefully keep them clear from Weeds, which is the only Culture they will require, except the *Black* and *White Cos Lettuce*, which ſhould be tied up when they are full grown (in the Manner as was directed for blanching of *Endive*) to whiten their inner Leaves, and render them criſp, otherwiſe they are ſeldom good for much, rarely cabbaging without this Aſſiſtance.

When your *Lettuces* are in Perfection, you ſhould look over them, and mark as many of the beſt of them as you intend for Seed, (in the ſame Manner as was before directed for the common *Cabbage Lettuce*) being very careful not to ſuffer any ordinary ones to ſeed amongſt them, as was before obſerv'd, which would prove more injurious to theſe Sorts than to the common, as being more inclinable to degenerate with us, if they are not carefully preſerved.

You may alſo continue theſe Sorts through the Seaſon, by ſowing of them in *April*, *May* and *June*, obſerving (as was before directed) to ſow the late Crops in a moiſt, ſhady Situation, otherwiſe they will run up to Seed before they grow to any Size; but in *Auguſt*, toward the latter End, you may ſow of theſe Sorts to abide the Winter, which Plants ſhould be tranſplanted either under Glaſſes, or into a Bed which ſhould be arched over with Hoops, in order to be cover'd in the Winter, otherwiſe in hard Winters they are often deſtroyed; but you muſt conſtantly let theſe Plants have as much open free Air as poſſible when the Weather is mild, only covering them in hard Rains or froſty Weather; for if they are kept too cloſely cover'd in Winter, they will be ſubject to a Mouldineſs, which ſoon rots them.

In the Spring theſe Plants ſhould be planted out into a rich light Soil, allowing them at leaſt eighteen Inches Diſtance each Way; for if they are planted too cloſe, they are very ſubject to grow tall; but ſeldom cabbage well: And from this Crop, if they ſucceed well, it will be proper to ſave your Seeds, tho' you ſhould alſo ſave from that Crop ſown in the Spring, becauſe ſometimes it happens that the firſt may fail by a wet Seaſon, when the Plants are full in Flower, and the ſecond Crop may ſucceed, by having a more favourable Seaſon, and if they ſhould both ſucceed, there will be no harm in that, ſince the Seeds will grow very well when two Years old, and if well ſaved at three; but this will not always happen.

The moſt valuable of all the Sorts of *Lettuces* in *England* are the *Verſailles*, the *Sileſia*, and *Cos*, tho' ſome People are very fond of the *Royal* and *Imperial Lettuces*; but they ſeldom ſell ſo well in the *London* Markets as the other, nor are ſo generally eſteem'd.

The *Brown Dutch* and *Green Capuchin Lettuces* are very hardy, and may be ſown at the ſame Seaſons as was directed for the common *Cabbage Lettuce*; and are very proper to plant under a Wall or Hedge to ſtand the Winter, where many times theſe will abide, when moſt of the other Sorts are deſtroy'd, and therefore they will prove very acceptable at a Time when few other Sorts are to be had; they will alſo endure more Heat and Drought than moſt other Sorts of *Lettuce*, which renders them very proper for late ſowing, for it often happens in very hot Weather, that the other Sorts of *Lettuce* will run up to Seed in a few Days after they are cabbag'd, whereas theſe will abide a Fortnight or three Weeks in good Order, eſpecially if Care be taken to cut the forwardeſt firſt, leaving thoſe that are not ſo hard cabbag'd to the laſt. In ſaving of theſe Seeds the ſame Care ſhould be taken to preſerve only ſuch as are very large and well cabbaged, otherwiſe the Seeds will degenerate, and be good for little.

The *Red Capuchin*, *Roman* and *Prince Lettuces* are pretty Varieties, and are very early Cabbagers, for which Reaſon a few of them may be preſerv'd; as may alſo ſome of the *Aleppo*, for the Beauty of its ſpotted Leaves; tho' very few

People care for either of theſe Sorts at Table, when the other more valuable ones are to be obtain'd; but in a Scarcity, theſe may ſupply the Place pretty well. The Seeds of theſe muſt alſo be ſaved from ſuch as cabbage beſt, otherwiſe they will degenerate, and be good for little.

In ſaving Seeds of all theſe Sorts of *Lettuce*, you ſhould obſerve, when the Plants have run up, to fix a Stake down by the Sides of each, to which the Stem ſhould be faſten'd, to prevent their being broke, or blown out of the Ground by Wind, to which the *Sileſia* and the other large-growing *Lettuces* are very ſubject when they are in Flower. You muſt alſo obſerve to cut ſuch Branches of the large-growing *Lettuces* as ripen firſt, and not wait to have the Seed of the whole Plant ripe together, which never happens, but, on the contrary, ſome Branches will be ripe a Fortnight or three Weeks before others; and when you cut them, they muſt be ſpread upon a coarſe Cloth in a dry Place, that the Seeds may dry; after which, you ſhould beat 'em out; and dry 'em again, and then preſerve them for Uſe, being careful to hang 'em up where Mice and other Vermin can't come at 'em; for if they do, they will ſoon eat them up.

LACTUCA AGNINI; *vide* Valerianella.

LADY's SLIPPER; *vide* Helleborine.

LADY's SMOCK; *vide* Cardamine.

LAGOPUS; *vide* Trifolium.

LAMIUM; Archangel, *or* Dead-Nettle.

There are great Varieties of theſe Plants, which are preſerv'd in curious Botanick Gardens, many of which grow wild in divers Parts of *England*; but being of little Beauty, they are rarely cultivated in any other Gardens; for which Reaſon, I ſhall not trouble the Reader with any farther Account of them.

LAMPSANA. Nipplewort.

This is alſo a very common Plant upon the Sides of dry Banks in moſt Parts of *England*.

LAPATHUM. The Dock.

The *Characters* are;

The Cup of the Flower conſiſts of ſix Leaves, three of which are large, and of a red Colour; the other three are leſſer, and green: In the middle of the Cup are plac'd ſix Stamina: *The three outer ſmall Leaves of the Cup fall away when ripe; but the three inner large Leaves join together, and form a triangular Covering, in the Middle of which are contain'd ſhining three-corner'd Seeds.*

There are great Varieties of theſe Plants, which are preſerv'd in ſome Gardens, to increaſe the Number of their Plants: but as many of them are very common in *England*, and, if tranſplanted into a good Garden, and permitted to ſcatter their Seeds, do become very troubleſome Weeds; ſo I ſhall only name two or three of the moſt valuable Sorts in this Place.

1. LAPATHUM; *præſtantiſſimum, Rhabarbarum officinarum dictum. Mor. Hiſt.* The Pontick Rhubarb.
2. LAPATHUM; *Alpinum, folio ſubrotundo. Mor. Hiſt.* Round-leav'd Alpine Dock, *by ſome call'd*, Monk's Rhubarb.
3. LAPATHUM; *hortenſe, folio oblongo, ſive ſecundum Dioſcoridis. C. B. P.* Long-leav'd Garden Dock, *or* Patience.

The firſt of theſe Plants is by ſome ſuppos'd to be the true *Rhubarb*. But that does not appear, from the Figure and Conſiſtence of the Roots, which in this Plant, however cultivated with us, is not of the ſame Colour; nor has it ſuch a Reſin as is found in the true; and the Shape of the Roots appear very different, as is alſo the Strength in Medicine: ſo that until the true Rhubarb is better known, there can be little ſaid with Certainty on this Head.

The ſecond Sort is ſometimes cultivated in Gardens, for Medicinal Uſe; tho' there is a Diſpute whether this be the true *Monks Rhubarb* or not: but there is no great Difference between the Roots of this Plant, and the other diſputed Sort; ſo that either may be indifferently us'd.

The third Sort was formerly cultivated in Gardens as a Pot-herb; but of late Years it has been wholly diſus'd for that Purpoſe, and now only preſerv'd in Gardens for Medicinal Uſe.

Theſe Plants are all eaſily propagated by ſowing their Seeds in Autumn, ſoon after they are ripe, or early the ſucceeding Spring, in a rich, light, moiſt Soil, where they will grow to be very large, and, if ſingled out to the Diſtance of three Feet, will produce large ſtrong Roots, which will be fit for Uſe the ſecond Year after ſowing; when they ſhould be taken up ſoon after the Leaves are decay'd, and dry'd in a ſhady Place where the Air may freely paſs between them.

LARIX; The Larch Tree.

The *Characters* are;

The Leaves (which are long and narrow) are produc'd out of little Tubercles,, in Form of a Painter's Pencil, (*as in the* Cedar of Libanus) *but fall off in Winter. The Cones are ſmall and oblong, and (for the moſt part) have a ſmall Branch growing out of the Top; theſe are produc'd at remote Diſtances from the Male Flowers on the ſame Tree: The Male Flowers are (for the moſt part) produc'd on the underſide of the Branches, and, at their firſt Appearance, are very like ſmall Cones.*

The *Species* are;

1. Larix; *folio deciduo, conifera. J. B.* The Larch Tree.

2. Larix; *folio deciduo, rudimentis Conorum candidiſſimis. Pluk. Alm.* Larch Tree, with white Rudiments.

The firſt of theſe Trees is now pretty common in *Engliſh* Gardens: This is a Native of the *Alps* and *Pyrenæan* Mountains, but thrives exceeding well here, eſpecially if it be planted upon an elevated Situation; as may be obſerv'd by thoſe which were planted a few Years ſince at *Wimbleton* in *Surrey*, which are now grown to be large Trees, and produce annually a large Quantity of Cones.

The ſecond Sort ſeems to be only a ſeminal Variety from the firſt, from which it differs in the Colour of the Rudiments of the Cone, which in this is White, but in the other, of a bright Red Colour; as alſo in the Colour of the Leaves, which in this Sort are a ſomewhat lighter Green than thoſe of the other; nor do the Trees of this Kind ſeem to be ſo vigorous: But whether the Seeds of this Kind will produce the ſame, I can't as yet ſay, having never ſeen any of the Plants which were rais'd from theſe Seeds produce any Flowers; but however, it may be obtain'd by Inarching it into the Common Sort.

Theſe Trees are propagated by Seeds, which ſhould be ſown in the Beginning of *March*, upon a Bed of light Soil, expos'd only to the Morning Sun: Or otherwiſe, it may be ſown in Pots or Boxes of light Earth, and plac'd under a Hedge where they may have the Morning Sun only. The Seeds ſhould be cover'd about half an Inch thick, with fine light Earth, and in very dry Weather ſhould be gently refreſh'd with Water. In about ſix Weeks, if your Seeds were good, the Plants will come up, at which Time you ſhould carefully guard them againſt the rapacious Birds, who would otherwiſe pull off the Heads of the Plants, as they thruſt themſelves out of the Ground with their Covers on them; and obſerve to refreſh them with Water in dry Weather, eſpecially if they are ſown in Pots or Boxes, as alſo to keep them conſtantly clear from Weeds, which, if ſuffer'd to grow among the young Plants, will ſoon deſtroy them: nor ſhould they be too much expos'd to the Sun, or ſtrong Winds, both which are very injurious to theſe Plants while they are young. But in *October* you ſhould (if they are in Boxes or Pots) remove them into a Situation where they may be defended from ſharp Winds, which are ſometimes hurtful to 'em while young; but afterwards they will endure the ſevereſt Weather of our Climate.

The Latter-end of *March*, or Beginning of *April* following, you ſhould remove theſe Plants into Beds of light freſh Earth, at about ten Inches Diſtance each Way, obſerving to water them, if the Seaſon ſhould prove dry, as alſo to lay a little Mulch upon the Surface of the Ground, to prevent the Sun and Winds from drying their Roots: In theſe Beds they may remain two Years, during which Time you ſhould carefully keep them clear from Weeds; as alſo obſerve, if any of 'em incline their Heads downward, to thruſt a ſmall Stake into the Ground by ſuch of them, and faſten their Heads upright thereto; for if they are ſuffer'd to grow on one-ſide while young, they are rarely to be reduc'd to an upright Figure again.

When the Plants have remain'd in theſe Beds two Years, they will be fit to tranſplant into the Nurſery; in order to which, you ſhould make choice of a Piece of freſh light Earth not over-dry, nor too wet: This Ground ſhould be well dug, and cleans'd from Weeds, and Roots of Plants or Trees; and, after having laid it level, you ſhould mark out the Rows at three Feet Diſtance; then you ſhould take up the Plants carefully, preſerving a good Ball of Earth to their Roots, and plant them in the Lines at eighteen Inches aſunder, obſerving to mulch their Roots, and alſo to water them, to preſerve their Roots from drying. The beſt Seaſon for this Work is toward the Latter-end of *March*, or Beginning of *April*, juſt before the Plants begin to ſhoot; for if they are remov'd ſooner, they ſeldom ſucceed ſo well. During the Time they remain in this Nurſery, they muſt conſtantly be kept clean from Weeds; and the Ground between them ſhould be dug every Spring, that it may be looſe for the Fibres of their Roots to ſtrike into; and the Weeds will be hereby more effectually deſtroy'd than by any other Method: And the Roots of the Plants being annually cut round, will cauſe 'em to puſh out a greater Number of Fibres, whereby they will be much ſafer to remove than they would be if permitted to grow undiſturb'd for ſeveral Years.

You muſt alſo obſerve to train their Heads upright, and not ſuffer them to grow awry, which they are naturally too much inclin'd to: But I would by no means adviſe the Sheering them into Pyramids, (as is too often practis'd) but rather lead 'em up for Timber Trees; for they will grow to a conſiderable Size, provided they like the Soil they are planted in.

In removing theſe Trees from the Nurſery to the Places where they are deſign'd to be continu'd, you ſhould always obſerve to do it juſt before they ſhoot out in the Spring, as alſo to take them up with a large Ball of Earth to their Roots; and when planted, the Ground ſhould be mulch'd, and the Plants ſtak'd, to prevent the Wind from looſening them, or blowing 'em out of the Ground. Theſe Directions, if duly executed, will be ſufficient, and there will be no Danger of not ſucceeding. But the chief Cauſe why many of theſe Trees have fail'd, upon their being remov'd, was, the not doing it in a proper Seaſon, or elſe that they were not carefully taken up.

Theſe Trees are very proper for the Sides of barren Hills, where few other Sorts will thrive ſo well; and during the Summer they appear very beautiful; but in Autumn they caſt their Leaves, whereby ſome People have been deceiv'd, by ſuppoſing 'em dead, and have deſtroy'd 'em.

From the wounded Bark of this Tree exſudes the pureſt *Venice Turpentine*; and on the Body and Branches of it grows the *Agaric*, which is a Drug us'd in Medicine: And the Wood is very durable, and (by ſome) reported to be very difficult to burn. But I don't know how this ſhould be, to a Tree which abounds with Turpentine; tho' it is ſaid alſo to be ſo ponderous as to ſink in Water. It will poliſh exceeding well, and is by the Architects abroad much coveted, both for Houſes and Building of Ships. *Witſen*, a Dutch Writer upon *Naval Architecture*, mentions a Ship to be long ſince found in the *Numidian* Sea, twelve Fathoms under Water, being chiefly built of this Timber and *Cypreſs*, both which Woods were reduc'd to that hardneſs, as to reſiſt the ſharpeſt Tools; nor was any Part of it periſh'd, tho' it had lain above a Thouſand Years ſubmerg'd. And it was upon Tables of this Wood that *Raphael* and ſeveral of the greateſt Artiſts eterniz'd their Skill, before the Uſe of Canvas was introduced.

LARKSPUR; *vide* Delphinium.

LASERPITIUM. Laſer-wort.

This is a Kind of Umbelliferous Plant, of which there are ſeveral Sorts preſerv'd in curious Botanick Gardens: But as they are Plants of little Beauty or Uſe in *England*, I ſhall omit mentioning them in this Place.

LATHYRUS; Chichling Vetch.

The *Characters* are;

It hath a papilionaceous Flower, out of whoſe Empalement riſes the Pointal, cover'd with a membranaceous Sheath, which afterwards becomes a Pod, ſometimes round, ſometimes cylindrical, and at other times angular; to which may be added, it hath a compreſs'd Stalk, with a rais'd Rib, and a leafy Border; and has only one Pair of Leaves, growing on the Nerves, which terminates in a Tendril.

The *Species* are;

1. LATHYRUS; *latifolius. C. B.* Broad-leav'd *or* Common Everlaſting Peas.

2. LATHYRUS; *latifolius, minor, flore majore. Boerh. Ind.* Leſſer Broad-leav'd Everlaſting Peas, with a large Flower.

3. Lathyrus; *major, Narbonenſis, anguſtifolius. C. B.* Greater Narrow-leav'd Everlaſting Peas.

4. Lathyrus; *arvenſis, repens, tuberoſus. C. B.* Creeping Chichling, *or* Peas Earth-Nut, with a Tuberoſe Root.

5. Lathyrus; *Tingitanus, ſiliquis Orobi, flore amplo ruberrimo. Mor. Hiſt.* Tangier Chichling, with a large deep-red Flower.

6. Lathyrus; *diſtoplatiphyllus, hirſutus, mollis, magno & peramano, flore odoro. Hort. Cath.* Broad-leav'd, hairy ſoft Chichling, with a large and very beautiful purple ſweet-ſmelling Flower, *commonly call'd*, Sweet-ſcented Peas.

There are ſeveral other Varieties of this Plant, which are preſerv'd in curious Botanick Gardens as Curioſities; but theſe here mention'd being the moſt valu'd for their beautiful Flowers, I ſhall omit the others, as they are ſeldom cultivated for Uſe or Beauty.

The three firſt Sorts are abiding Plants, which ſend forth ſtrong downright Roots very deep into the Earth; for which Reaſon they ſhould not be often remov'd, which would prevent their growing ſtrong, or producing many Flowers.

They are propagated by Seeds, which ſhould be ſown the Beginning of *March*, upon a Bed of light freſh Earth, covering them about half an Inch deep. But the beſt Method is, to make a ſhallow Drill in the Ground, and then drop the Seeds therein about ſix Inches Diſtance; theſe Drills ſhould be a Foot aſunder, for the Conveniency of hoeing and cleaning the Ground between them; which muſt conſtantly be done, otherwiſe the Weeds will over-bear and deſtroy them: but they will require no farther Care, being very hardy Plants, until the Spring following, at which Time, (*viz.* in *March*) juſt before they begin to ſhoot, the Roots ſhould be carefully taken up, and tranſplanted where they are to continue, placing them at leaſt two Feet aſunder, otherwiſe they will over-run each other, or whatever other Plants ſtand near them. If the Seaſon ſhould prove dry, you muſt give them ſome Water, to ſettle the Earth to their Roots; which ſhould be now-and-then repeated, if it continue dry Weather, until the Plants have taken Root: after which, they'll require no farther Culture but to keep them clear from Weeds, and in the Summer-time to ſupport them with ſtrong Stakes, otherwiſe they'll trail upon the Ground and rot the Branches, and deſtroy whatever Plants grow near them.

Theſe Plants are very proper to plant againſt a dead Hedge, where they will run over it, and if they be kept train'd up, will cover it in the Summer, and in ſuch Places they will produce great Quantities of Flowers; but if they are planted in a Flower-Garden, they muſt have a great deal of Room, and in Summer ſhould have very ſtrong Stakes plac'd down by them, to which they muſt be cloſely faſten'd, otherwiſe they will ramble and trail upon the Ground, and appear very unſightly: for if the Ground be good in which they are planted, and the Roots are very ſtrong, they will ſometimes grow eight or ten Feet high in a Seaſon, and produce abundance of Flowers, which are very ornamental in Baſons or Pots of Flowers, to place in Chimnies or other Parts of large Rooms. Theſe produce their Flowers in *June* and *July*, and their Seeds are perfected in *Auguſt*, their green

Leaves decay in *Autumn*, and riſe again the ſucceeding *Spring*, their Roots continuing good for many Years: They delight moſt in a light Soil, not too dry nor over wet, but will grow in almoſt any Soil or Situation, but beſt in that which is expos'd to the Sun.

The firſt Sort is moſt commonly cultivated in the *Engliſh* Gardens, but the ſecond is much preferable to that, as being of humbler Growth, never riſing above five Feet high, and ſo is more proper for Flower-Gardens, and the Flowers are much larger, and of a deeper red Colour, and commonly are produc'd in larger Cluſters. The third Sort is ſeldom propagated in Flower-Gardens, tho' for Variety it ſhould have a Place amongſt other large Plants. The Flowers of this Kind are ſmaller, and of a purple Colour.

The tuberoſe-rooted Sort is preſerv'd as a Curioſity in many Gardens, tho' there is no great Beauty in its Flowers. This may be propagated either by Seeds, as the others, or by its Roots, which increaſe very faſt under-ground, and is an abiding Plant, but ſhould not be plac'd amongſt other curious Flowers, for the Roots propagating under-ground, will come up and ſpread over whatever Plants grow near them.

The fifth and ſixth Sorts are annual Plants, which are propagated only by Seeds: Theſe may be ſown in *March*, in the Places where they are to remain for good, being Plants that ſeldom will grow if tranſplanted; except it be done while they are very young: Theſe ſhould be either ſown near a Pale, Wall, or Eſpalier, to which they may be train'd; or if ſown in the open Borders, ſhould have Stakes plac'd by them, to which they ſhould be faſten'd, otherwiſe they will trail upon the Ground and appear very unſightly, which is the only Culture theſe Plants require, except the clearing them from Weeds: They produce their Flowers in *July*, and their Seeds are perfected in *Auguſt* and *September*.

But the beſt Method to have them very ſtrong, is, to ſow their Seeds in *Auguſt*, under a warm Wall or Hedge, where they will come up in *Autumn*, and abide the Winter very well; and theſe will begin to flower in *May*, and continue to produce freſh Flowers until *July* or later, according to the Heat of the Seaſon: and one of theſe autumnal Plants will be as large as four or five of thoſe ſown in the Spring, and produce ten times the Number of Flowers; and upon theſe Plants you'll always have good Seeds, when ſometimes the other will miſcarry: However, 'tis very proper to ſow their Seeds at two or three different Seaſons, in order to continue their Flowers the longer, for the late planted ones will continue blowing until the Froſt prevents them.

The ſweet-ſcented Sort is the moſt valuable, both for the Beauty and Fragrancy of its Flowers.

LAVATERA.

The *Characters* are;

The Leaf, Flower, Style, and Cup of the Flower, have the Appearance of a Mallow: *The Stile becomes a Fruit which is arm'd in Front with a hollow Shield: The Seeds, which are ſhap'd like a Kidney, growing to the inner Part.*

The *Species* are;

1. Lavatera; *folio & facie Altheæ. Tourn.* *Lavatera*, with the Leaf and Face of Marſh-mallow.

2. LAVATERA; *folio & facie Althææ, flore albo, Lavatera*, with the Leaf and Face of Marſhmallow, and a white Flower.

3. LAVATERA; *Africana, flore pulcherrimo. Boerh. Ind.* African *Lavatera*, with a moſt beautiful Flower.

Theſe are all annual Plants, which are propagated by Seeds: The Seaſon for ſowing 'em is in *March*, upon a Bed of freſh light Earth; and when the Plants are come up, you muſt carefully clear them from Weeds; and in very dry Weather they muſt be now-and-then refreſh'd with Water. When they are about two Inches high, you muſt tranſplant them into the Places where they are deſign'd to remain, which ſhould be in the Middle of the Borders in the Flower-Garden, for if the Soil be good, they will grow two or three Feet high: In tranſplanting them, you muſt take 'em up very carefully, preſerving a Ball of Earth to their Roots, otherwiſe they are apt to miſcarry: And alſo water and ſhade them until they have taken Root; after which they will require no other Care but to clear them from Weeds, and to faſten them to Stakes to prevent their being injur'd by ſtrong Winds. You may alſo ſow their Seeds in Autumn; and when the Plants are come up, you ſhould tranſplant them into ſmall Pots, which, towards the End of *October*, ſhould be plac'd into a common Hot-bed Frame, where the Plants being defended from ſevere Froſts, will abide the Winter very well; and in the Spring you may ſhake them out of the Pots, and plant them into larger, or elſe into the full Ground, where they may remain to flower: The Plants thus manag'd, will be larger, and flower ſtronger and earlier than thoſe ſown in the Spring. and from theſe you will conſtantly have good Seeds; whereas thoſe ſown in the Spring do ſometimes miſcarry.

Theſe produce their Flowers in *June*, *July* and *Auguſt*, and their Seeds ripen ſoon after.

They are very ornamental Plants in a fine Garden, when plac'd among other Annuals, either in Pots or Borders; their Flowers are very like thoſe of the *Mallow*, but are larger and of a more beautiful Colour.

LAVENDULA; Lavender.

The *Characters* are;

It is one of the verticillate Plants, whoſe Flower conſiſts of one Leaf, which is divided into two Lips; the Upper-lip ſtanding upright, is roundiſh, and for the moſt Part bifid; but the Under-lip is cut into three Segments, which are almoſt equal: Theſe Flowers are diſpos'd in Whorles, and are collected into a ſlender Spike upon the Top of the Stalks.

The *Species* are;

1. LAVENDULA; *latifolia. C. B.* Common broad-leav'd Lavender.

2. LAVENDULA; *anguſtifolia. C. B.* Common narrow-leav'd Lavender *commonly call'd* Spike Lavender.

3. LAVENDULA; *latifolia, ſterilis. Mort. Hiſt.* Broad-leav'd barren Lavender.

4. LAVENDULA; *anguſtifolia, flore albo. C. B. P.* Narrow-leav'd Lavender, with white Flowers.

5. LAVENDULA; *folio diſſecto. C. B.* Cut-leav'd Lavender.

6. LAVENDULA; *folio diſſecto. flore albo. Boerh. Ind.* Cut-leav'd Lavender, with a white Flower.

7. LAVENDULA; *folio longiori tenuius & elegantius diſſecto. Tourn.* Lavender with a longer and more

beautiful fine cut Leaf, *commonly call'd*, Canary Lavender.

The firſt of theſe *Species*, tho' very common in moſt Parts of *Europe*, yet in *England* is rarely to be found, notwithſtanding it is as eaſily propagated as any of the other Sorts.

The ſecond is the moſt common Sort in the *Engliſh* Gardens, being propagated for medicinal Uſes, *&c.*

The third Sort is a Degeneracy from the ſecond, having much broader and greener Leaves, but rarely ever flowers while it continues with the Leaves broad; but whenever it flowers, the Leaves of that Part of the Plant become narrow again.

The fourth Sort is alſo a Variety of the ſecond, from which it differs in the Colour of the Flowers, which in this Sort are white, and thoſe of the ſecond are blue.

Theſe are all propagated by Cuttings or Slips; the beſt Seaſon for which is in *March*, when you ſhould plant them in a ſhady Situation, or at leaſt ſhade them with Mats until they have taken Root; after which they may be expos'd to the Sun, and when they have obtain'd Strength, may be remov'd to the Places where they are deſign'd to remain: Theſe Plants will abide the longeſt in a dry, gravelly, or ſtony Soil, in which they will endure our ſevereſt Winters, tho' they will grow much faſter in the Summer, if they are planted upon a rich, light, moiſt Soil, but then they are generally deſtroy'd in Winter; nor are the Plants half ſo ſtrong ſcented, or fit for medicinal Uſes as thoſe which grow upon the moſt barren, rocky Soil.

The firſt and ſecond Sorts may alſo be propagated from Seeds, which ſhould be ſown in *March*, upon a dry undung'd Soil; and when the Plants are come up, they muſt be carefully clear'd from Weeds, until they are about two Inches high, when they ſhould be tranſplanted into other Beds, allowing them a Foot Diſtance each Way: In theſe Beds they may remain, to be cut for Uſe; or you may afterwards tranſplant them into dry Borders or Beds, in any other Place where you would have them ſtand, obſerving never to dung the Ground where they are planted, which would cauſe them to grow vigorouſly in Summer, but will haſten their Decay, as was before obſerv'd.

Theſe Plants were formerly in uſe to make Edgings to Borders in Gardens; for which Purpoſe they are by no means proper: for they will grow too large for ſuch Deſigns; and if they are often cut in very dry Weather, they are ſubject to decay, and in hard Winters they are very often kill'd, ſo that the Edging will not be compleat; beſides, theſe Plants do greatly exhauſt the Goodneſs of the Soil, whereby the Plants in the Borders wil be depriv'd of their Nouriſhriſhment; ſo that they ſhould never be planted in a fine Garden amongſt other choice Plants or Flowers, but rather be plac'd in Beds in the Phyſick-Garden: Theſe Plants produce their Flowers in *June* and *July*, at which Time they ſhould be gather'd and dry'd in a ſhady Place, and preſerv'd dry for Uſe.

The fifth, ſixth and ſeventh Sorts, are commonly ſown every *Spring*, on Borders or Beds of light, freſh Earth; and when the Plants come up, they may be tranſplanted into other Borders of the Flower-Garden, or into Pots, to remain for good, where they will produce their Flowers in *July* and *Auguſt*, and their Seeds are ripe ſoon after. Theſe are pretty Plants to place in large Borders amongſt other Plants for Variety, but they are never us'd with us: They may alſo be preſerv'd over the Winter, if plac'd into a Green-houſe in *Autumn*, which is the ſureſt Method to obtain good Seeds from the ſeventh Sort, which rarely ripens Seeds the firſt Year; but they ſeldom continue longer than two Years with us, and many Times (if they have produc'd Seeds the firſt Year) they will not continue longer. Theſe Plants will ſometimes grow from Cuttings, but then the Cuttings muſt be ſtrong and inclinable to be woody, for if they are very ſoft and ſpungy, they ſeldom ſucceed; and they ſhould alſo be plac'd upon a moderate Hot-bed, which will greatly promote their taking Root. This Method is ſometimes neceſſary to preſerve the Sorts which might otherwiſe be in Danger of being loſt.

LAUREOLA; *vide* Thymelea.

LAUROCERASUS; The Laurel *or* Cherry-Bay.

The *Characters* are;

It hath broad, thick, ſhining, ever-green Leaves, ſomewhat like thoſe of the Bay-Tree: *The Cup of the Flower is hollow and Funnel-ſhap'd, ſpreading open at the Top, and is divided into five Parts: The Flower conſiſts of five Leaves, which expand in Form of a* Roſe, *having many* Stamina *in the Center: The Fruit (which are like thoſe of the* Cherry-Tree) *are produc'd in Bunches, and the Stone is longer and narrower than that of the* Cherry.

The *Species* are;

1. Laurocerasus; *Cluſ. Hiſt.* The common Laurel *or* Cherry-Bay.

2. Laurocerasus; *foliis ex albo variegatis. Cat. Plant. Angl.* The White-ſtrip'd Laurel.

3. Laurocerasus; *foliis ex luteo variegatis. Cat. Plant. Angl.* The Yellow-ſtrip'd Laurel.

4. Laurocerasus; *Luſitanica, minor. Tourn.* The Dwarf Portugal Laurel, *call'd* Aſarero.

The firſt Sort is very common in moſt *Engliſh* Gardens, and was formerly in greater Requeſt than it is at preſent, when theſe Trees were planted againſt North-walls to cover them; as alſo in the Parterre-Garden, where they were frequently ſheer'd up to form Pyramids and Globes, for which Purpoſe, this was one of the moſt improper Trees; for the Leaves being very large, they were cut in divers Places by the Sheers, which render'd them unſightly: But though this Plant is very improper for ſuch Uſes, yet it is valuable for planting upon the Sides of cold barren Hills, where it will grow to a large Magnitude, and make a fine Appearance through the whole Year, and in ſuch Situations it will riſe to a large Tree.

They are eaſily propagated by planting Cuttings in *July*, in a ſhady, moiſt Border, where they will ſoon take Root; and in the *Spring* following may be remov'd into the Nurſery, planting them three Feet diſtance Row from Row, and two Feet aſunder in the Rows, obſerving to clear them from Weeds, and to dig the Ground annually between the Rows, and prune off their under Branches, to make them aſpire in Height; and when they have remain'd in this Place three Years, they will be fit to tranſplant into the Places where they are to continue. The beſt Seaſon for tranſplanting theſe Trees is in *April*, juſt before they begin to ſhoot; but in taking them up, you muſt always obſerve to preſerve a Ball of Earth to their Roots: and when they are planted, you muſt mulch the Ground round their Stems to preſerve it from drying, and refreſh them often with Water (eſpecially if the Seaſon be dry) until they have taken Root, after which, they will require but very little Culture.

But if you deſign theſe Trees for large Standards, the beſt Method is to propagate them from the Berries, which will eaſily riſe, and will ſooner grow to large Trees than thoſe propagated by Cuttings. The Manner of ſowing theſe Seeds is as follows; You ſhould dig and prepare a Bed or two (according to the Quantity of Seeds you have to ſow) and level the Ground very even; then ſow the Berries thereon ſoon after they are ripe, covering them over about an Inch thick with light Earth: In the *Spring* the young Plants will appear; at which Time you muſt carefully clear them from Weeds, and in dry Weather often refreſh them with Water, which will greatly promote their Growth: theſe Plants (if they have made a good Progreſs) will be fit to tranſplant the ſucceeding *Spring*; when you muſt prepare ſome freſh Beds, into which they ſhould be remov'd, planting them ten Inches or a Foot aſunder each way, obſerving to water them, and lay a little Mulch about their Roots: In theſe Beds they may continue two Years; after which they ſhould be remov'd either into the Places where they are to remain, or in a Nurſery, as was before directed.

There are ſome People, who adviſe the Budding of this Tree upon the common Black-*Cherry*-Stock, in order to render it more vigorous; but as I have never yet ſeen any large Trees which were thus raiſ'd, ſo I can't ſay how well it will ſucceed, though I have often ſeen the *Cherry* grafted on this Tree, and this grafted upon the *Cherry*, both which have taken very well; but I much doubt whether they will join ſo well together, as to add to the Stature of the Tree, eſpecially ſince we find that moſt Sorts of Fruit-Trees grow much larger when they are ſuffer'd to remain ungrafted as they come from Seeds, than thoſe which are budded or grafted.

The Berries of this Tree are by ſome put into Brandy to make Ratafia, for which Purpoſe it is greatly preferr'd to *Apricock* Stones, giving the Brandy a much pleaſanter bitter Taſte, and by ſome the Leaves are us'd for the ſame Purpoſe; but this ſhould be cautiouſly done, ſince, by ſome late Accounts from *Ireland*, we are inform'd, that the diſtill'd Water of theſe Leaves is found to be poiſonous. Which Account has been ſince confirmed by ſeveral Experiments, which have been made in *London*.

Theſe Berries are much coveted by divers Sorts of Birds, for which Reaſon ſome of the Trees ſhould be planted in the Clumps, where you intend a Shelter for Birds to harbour, and their Leaves remaining always green, will be of great Uſe to theſe Inhabitants in Winter; ſo that ſuch Plantations will be well ſtor'd with *Black-birds*, *Thruſhes*, and many other Sorts of Singing-Birds, to the no ſmall Pleaſure of ſuch Places.

The two variegated Kinds may be propagated by Cuttings, or by budding or grafting them on the plain Sort; but theſe muſt conſtantly be planted on a poor Soil, otherwiſe they will become plain again. Theſe are pretty Varieties amongſt other variegated Plants.

The *Portugal* Dwarf Laurel is ſomewhat tenderer than the common Sort, and is ſubject to be injur'd by ſevere Froſts, but will endure our ordinary Winters abroad very well. This is propagated in the ſame Manner as the common Sort, but will not grow near ſo large; however, it is very proper to intermix with Evergreens of middling Growth, where, if it be planted on a dry Soil, and has a warm Situation, it will ſtand the Teſt of our Winters very well.

LAURUS; The Bay-Tree.

The *Characters* are;

It hath a Flower conſiſting of one Leaf, which is ſhap'd like a Tunnel, and divided into four or five Segments, the Male Flowers (which are produc'd on ſeparate Trees from the Female) have eight Stamina, *which are branched into Arms; the Ovary of the Female Flowers becomes a Berry, incloſing a ſingle Seed within a horny Shell, which is cover'd with a Skin.*

The *Species* are;

1. LAURUS; *vulgaris. C. B.* The common Bay, with Male Flowers.
2. LAURUS; *vulgaris, Fœmina. Boerh. Ind.* The common Fruit-bearing Bay-Tree.
3. LAURUS; *vulgaris, folio elegantiſſimè variegato aureo. Boerh. Ind.* The Gold-ſtrip'd Bay-Tree; *vulgò.*
4. LAURUS; *vulgaris, folio undulato. H. R. Par.* The common Bay-Tree, with waved Leaves, and Male Flowers.
5. LAURUS; *vulgaris folio undulato, fœmina. Boerh. Ind.* The Berry-bearing Bay-Tree, with waved Leaves.
6. LAURUS; *tenuifolia. Tab. Icon. Mas.* The Narrow-leav'd Bay, with Male Flowers.
7. LAURUS; *tenuifolia, Fœmina. Boerh. Ind.* The Narrow-leav'd Berry-bearing Bay-Tree.
8. LAURUS; *latiori folio. Lugd. Mas.* The Broad-leav'd Bay-Tree, with Male Flowers.
9. LAURUS; *latifolia, Fœmina. Boerh. Ind.* The Broad-leav'd Berry-bearing Bay-Tree.
10. LAURUS; *Indica. Hort. Farneſ. Ald.* The Broad-leav'd Indian Bay-Tree, *commonly call'd* Wild Cinnamon.

The firſt and ſecond Sorts are old Inhabitants of the *Engliſh* Gardens; and as they are Varieties obtained from the ſame Seeds, ſo they are promiſcuouſly cultivated, and are not to be diſtinguiſhed aſunder until they have produc'd Flowers.

Theſe Plants are propagated either from Seeds, or by laying down the tender Branches, which will take Root in one Year's Time, and may then be taken off, and tranſplanted either into a Nurſery, or the Places where they are deſign'd to remain. But if you would propagate them from Seeds, you muſt gather them from the Trees in *January* (at which Time they commonly are ripe) and preſerve them in Sand until the Beginning of *March*, when you muſt prepare a Bed of light, dry Earth, which ſhould be ſituated in a warm Place where the Plants may be defended from the North and Eaſt Winds: This Bed be levell'd exactly even, and then draw ſome ſmall Furrows croſs it at about eight Inches Diſtance, and an Inch deep, into which you ſhould drop the Seeds about two Inches aſunder, then cover them with Earth; and if the Seaſon ſhould prove very dry, you muſt often refreſh them with Water. In about two Months Time the young Plants will appear above-ground, when you muſt carefully clear them from Weeds; and in dry Weather if you refreſh them with Water, it will greatly promote their Growth: In theſe Beds they ſhould continue two Years, by which Time they will be large enough to tranſplant; you muſt therefore make Choice of a warm dry Spot of Ground, which ſhould be well dug and cleans'd from Weeds and Roots of Trees, *&c.* and laid even; then mark out the Lines three Feet diſtant from each other; and having taken up the Plants carefully with a Ball of Earth to their Roots, you muſt plant them exactly ſtrait in the Rows, at eighteen Inches aſunder, obſerving to water them well, as alſo to lay ſome Mulch upon the Surface of the Ground, near the Stems, to preſerve the Ground from drying too faſt. The beſt Seaſon for removing theſe Trees is in *April*, juſt before they begin to ſhoot.

During the Time theſe Plants remain in the Nurſery, you muſt obſerve to keep them clear from Weeds, digging the Ground between the Rows every *Spring*; as alſo to faſten the Shoots of the Plants to ſtrait Stakes, to prevent their growing crooked and unſightly; and alſo obſerve to prune off the Under-ſhoots, to make them advance in Height: But I can by no Means recommend the ſheering of theſe Plants into conical or pyramidal Figures (as is the general Practice) for the ſame Reaſon as I gave for the *Laurel, viz.* that the Leaves being large, are cut in Pieces, whereby the Plants are render'd very unſightly; but rather, that they ſhould be improved, ſo as to make large Trees, to which they are naturally diſpos'd to grow, could we prevent the Sheers from perpetually gnawing them.

Theſe Trees are very proper to plant upon the warm Sides of dry Hills, where they may be protected from the ſevere Blaſts of the North and Eaſt Winds; in which Situations I have ſeen ſome of theſe Trees upward of thirty Feet in Height, which is a plain Indication of their large Growth.

But I know it will be objected, that theſe Trees are often deſtroy'd by hard Winters, and ſo are improper to make large Plantations of in *England*. That they have been ſometimes kill'd by ſevere Winters, I can't deny: but if they are brought up thus hardily, as has been directed, and not ſheer'd, I dare affirm they will reſiſt the ſevereſt Cold of our Climate, when grown to a moderate Age, provided they are planted in a dry Soil, in which tho' their Leaves ſhould be entirely ſhrivell'd by extreme Cold, yet, if permitted to remain undiſturb'd, they will ſhoot again in the ſucceeding Summer, as I have more than once experienc'd. And in the hard Winter, *Anno* 1728, when moſt of the *Bay-Trees* ſeem'd to be deſtroy'd which grew abroad, and many People were ſo inconſiderate as to dig them up and throw them away, it was obſervable, that all thoſe which were permitted to ſtand, did ſhoot out again in the ſucceeding Summer, and recover'd their uſual Verdure. Which ſhould caution every Perſon, not to be over-haſty in condemning Trees to the Fire, but to wait for the Succeſs of a whole Seaſon, before they are pull'd up.

Bay-Leaves dry'd and reduc'd to Powder, as much as will cover an Half-Crown, being drank in a Glaſs of White-Wine, are ſaid ſeldom to fail of curing an Ague: Theſe Leaves are alſo uſed in divers Sauces in the Kitchen, and the Berries are often uſed in Medicine.

The Gold-ſtrip'd *Bay* is much more tender than the common Sort; for which Reaſon it muſt be planted in Pots, and hous'd in Winter with *Oranges*, *Myrtles*, &c. and muſt be plac'd ſo as to have as much free Air in mild Weather as poſſible, and will require to be frequently water'd. This Plant may be propagated by Layers, or by Budding it upon the Common *Bay*: but you muſt not plant it into very rich Earth, which will cauſe it to grow vigorouſly, whereby it will become quite plain; but, on the contrary, let it have a freſh light ſandy Soil, in which it will very well preſerve its beautiful Stripe.

The 4th, 5th, 6th, 7th, 8th and 9th Sorts are commonly preſerv'd in Pots or Tubs, and plac'd in the Green-houſe with *Oranges*, *Myrtles*, &c. But I dare ſay, either of theſe Sorts will thrive in the open Air, if planted in a warm dry Soil, and defended from the North and Eaſt Winds; but eſpecially the Broad-leav'd Sort, which I have experienc'd, will endure more Cold than the common *Bay*. But as they are leſs common, ſo they are generally preſerv'd with more Care; tho' they may either of them be propagated in as great Plenty as the common Sort, either by Layers or Seeds; for they will bear great Plenty of Berries, provided they are not kept ſheer'd; and theſe Berries will riſe full as well, and, many times, outgrow the common *Bay*, as I have frequently obſerv'd: ſo that why we have not theſe Trees in as great Plenty as the common Sort, is only owing to their not being propagated and planted abroad; moſt People imagining, becauſe they have been hitherto treated with great Care, that therefore they will not endure the Cold. Which is a great Miſtake; for we have found, by repeated Trials which have been made within a few Years paſt, that many of thoſe Plants which had been nurs'd up in Green-houſes, with great Care (whereby their Roots were confin'd, and the Plants circumſcrib'd and ſtarv'd in their Growth) when planted abroad, have made great Progreſs, and defy'd the moſt ſevere Cold of our Climate to injure them: Which is a great Encouragement to proceed in our Trials of this Kind; ſince, by this Method, we may naturalize a great Variety of valuable Trees and Plants to our Country, which may hereafter be found of great Benefit. Nor ſhould we be diſcourag'd, if, in the firſt Attempt, we ſhould not ſucceed ſo well as we might wiſh; for, by ſeveral Eſſays, we may overcome the Difficulty; and then the Pleaſure of having Denizen'd any Exotick Trees, will ſufficiently compenſate the Trouble, ſince hereby we eſtabliſh living Monuments of Praiſe.

The *Indian Bay* is too tender to endure our Cold Winters abroad as yet: Though I doubt not but that when theſe Plants are very ſtrong and woody, and ſome Care taken in their firſt Expoſure, they may be brought to thrive in the open Air; which, if once obtain'd, ſo as to have Seeds produc'd in *England*, the Off-ſpring will be better inured to our Climate. And if this Plant can be once well naturalized, ſo as to grow as in the warmer Parts of *Europe*, it will be one of the nobleſt Ever-greens, for Shade and Beauty, we ever obtain'd; for it is naturally a very ſtrait-growing Tree, and the Leaves are very broad, and of a ſhining green Colour, which renders it very agreeable.

This Plant is propagated by Seeds, (which are eaſily procur'd from *Portugal*, where theſe Trees grow in great Plenty) they ſhould be put into Pots fill'd with freſh light Earth, and plung'd into a gentle Hot-bed, to facilitate their Growth; and when the Plants are come up, you ſhould remove the Pots into another moderate Hot-bed, to forward them, where they ſhould remain until the Beginning of *June*, when you muſt harden them by degrees, to endure the open Air, into which they ſhould be remov'd about the Middle of that Month, obſerving to place the Pots in a well-ſhelter'd Situation, and in dry Weather you muſt often refreſh them with Water. The Beginning of *October* you muſt remove the Pots into the Green-houſe, placing them near the Windows, that the Plants may have as much free Air as poſſible in mild Weather; and obſerve that they do not ſuffer with Drought, for they will require to be frequently refreſh'd with Water. In *April* following you muſt take the Plants out of the Pots, preſerving the Earth to their Roots, and put each into a ſeparate Pot fill'd with the before-mention'd freſh light Earth: Then plunge them into a moderate Hot-bed for a Month or ſix Weeks, to haſten their taking Root; which done, you muſt harden them again, and expoſe them to the open Air, as before: And in Winter they muſt be hous'd again, obſerving the Directions before given. After five or ſix Years thus managing them, (ſtill obſerving every Year to let them continue longer out of the Houſe in Autumn, than the preceeding), you ſhould in *April* plant ſome of them into the full Ground, in a warm well-ſhelter'd Situation, that they may have good Rooting in the Ground before the Winter comes on: And in *Autumn* you muſt lay a little Mulch upon the Surface of the Ground, to prevent the Froſt from penetrating to their Roots. But if the Winter following ſhould prove ſevere, you ſhould twiſt a Band of Hay or Straw round their Stems, which will be of great Service to protect them from Cold: And after they have endured two or three Winters abroad, they will be pretty much out of Danger; for tho' a very hard Winter may afterwards kill ſome of their Branches, yet they will ſhoot again the following Summer.

LAURUS ALEXANDRINA; *vide* Ruſcus.

LAURUS TINUS; *vide* Tinus.

LAWN, is a great Plain in a Park, or a ſpacious Plain adjoining to a noble Seat.

As to the Dimenſions of it, it ſhould be as large as the Ground will permit; but never leſs, if poſſible, than thirty or forty Acres.

As to the Situation of a *Lawn*, it will be beſt to be in the Front of the Houſe, and to lie open to the neighbouring Country, and not pent up with Trees.

If the Houſe front the Eaſt, it will be moſt convenient, becauſe the Rooms will be ſhaded in the Afternoon, and ſo the Objects to be view'd from the Houſe will be much beautify'd by the Sun's ſhining upon them in the Afternoon: For if the beſt Room of the Houſe front the *Lawn*, as it always ſhould do, the Afternoon being the moſt uſual Time for People of Faſhion to ſolace themſelves in ſuch Rooms, then the Afternoon Sun will not be offenſive to thoſe Rooms; nor will the Proſpect be interrupted, but render'd more pleaſant: whereas, were it on the Weſt Side of the Houſe, the Sun by ſhining from the Object, and directly againſt thoſe Rooms, would by both hinder the Proſpect; and the Generality of Proſpects are moſt pleaſant when the Sun ſhines upon them.

Beſides, there is another Inconveniency; if the *Lawn* be on the Weſt Side of the Houſe, it will give the more way to the Weſt Wind (which is commonly the greateſt) to injure the Houſe, by its having a free Paſſage to it.

If the *Lawn* be on the South Side of the Houſe, it may do well enough, for the Reaſons before-mention'd; for the Sun's Rays being then darted obliquely, will not much interrupt the Proſpect; and the Sun ſhining moſt part of the Day on that Side of the Houſe, will ſtill add to the Beauty of that Front, which ought to be the beſt Front in the Houſe; therefore a *Lawn* on that Side will much help the Proſpect of the Houſe.

It will not be at all convenient to have the *Lawn* on the North Side of the Houſe, becauſe it will lay the Houſe too open to the Cold North Winds, *&c.* therefore it will be more eligible to plant Wilderneſſes and Woods on the Weſt and North Sides of the Houſe.

If the Figure of the Houſe be built in this Form, Ⅱ, or any other, the Front may be on both Sides the Houſe alike, making an Angle at the Middle of the Front, or at ſome Court Gate right before it, and breaking off at a convenient Diſtance from the Houſe.

As to the Figure of a *Lawn*, the Square is a very proper one, and if it be bounded with Walks it may not be much amiſs, though I rather recommend an open *Lawn*; but if Perſons chuſe to have it bounded, a ſingle Row of Elm Trees ſet at a good Diſtance one from another, will not look amiſs, and being ſo placed, they will the better ſhew the Shape of their Heads, but however, the Front of the *Lawn* ſhould be left open, except the *Lawn* fall very much from the Houſe.

If Perſons will, there may be three Avenues breaking out at three Angles; or one at the Angle oppoſite to the Houſe, and if the *Lawn* be a riſing Ground to the Houſe, ſome Trees ſet thin upon it will not look unpleaſant. If the *Lawn* be a Circle, it may not be amiſs; but then it ought to break off before it comes againſt the Front.

Neither is a Triangle a very improper Figure for a *Lawn*, but if ſo, the Angle which leads to the Front muſt not be too acute; but it ſhould rather be obtuſe or right-angled, at the Angle that is next to the Front.

If the *Lawn* be bounded with Trees, Lime Trees are very proper for that Purpoſe, becauſe they are Trees that will grow well in any Soil, if Care be taken in the Planting of them; and beſides that, all the Trees will grow in a very fine Shape, appearing as though they were cut, if they are not too thick planted, and you will have a Proſpect of the adjoining Country between their Stems, eſpecially if their Heads are pruned up to a reaſonable Height; but if that Part of the Country upon which you look is not agreeable, then you ſhould bound the View with a riſing Plantation of Trees, formed into an Amphitheatre, which will be very agreeable.

The Elm is a very proper Tree for planting of *Lawns*, having a fine green Leaf, and if the Ground be natural to it, it will grow to a large Tree and ſtrait, if it be ſtill kept pruned as it ought to be.

The Beech makes a ſtately Tree where it likes the Ground, alſo the Cheſnut, the Walnut and the Black-Cherry Tree, for where they like the Ground, they are not only quick Growers, but repreſent a very delightful Scene in the Spring, when cloath'd in their white Attire.

Firs and Pines do very well, if the Ground be ſuitable to them, and theſe being always Green, afford a conſtant Pleaſure both in Winter and Summer.

LAYERS: Many Trees may be propagated by *Layers*, the Ever-greens about *Bartholomew-tide*, and other Trees about the Month of *February*.

This is to be performed by ſliting the Branches a little way, and laying them under the Mould about half a Foot; the Ground ſhould firſt be made very light, and after they are laid, they ſhould have a little Water given them.

If they do not comply well in the laying of them down, they muſt be pegg'd down with a Hook or two, and if they have taken ſufficient Root by the next Winter, they muſt be cut off from the main Plants, and planted in the Nurſery, as is directed about Seedlings.

Some twiſt the Branch or bare the Rind, and if it be out of the Reach of the Ground, they faſten a Tub or Basket near the Branch, which they fill with good Mould, and lay the Branch in it.

Laying of Trees.

This Operation is thus performed.

1ſt, Take ſome of the Boughs and lay them into the Ground about half a Foot deep in fine freſh Mould, leaving them with the End of the *Layer* about a Foot, or Foot and a half out of the Ground, and keep them moiſt during the Summer-ſeaſon; and they will probably have taken, and be fit to remove by Autumn: and if they have not by that Time taken Root, they muſt lie longer.

2dly, Tie a Piece of Wire hard round the Bark of the Bough, at the Place you intend to lay in the Ground, and twiſt the Ends of the Wire, ſo that they may not untie, and prick the Place above the Wire through the Bark with an Awl in ſeveral Places, and then lay it into the Ground, as before directed.

3dly, Cut a Slit upwards at a Joint, as is practis'd in laying of *Carnations*, which by Gardeners is called *Tonguing the Layers.*

4thly, Twiſt the Place that you deſign to lay in the Ground like a Withy, and lay it into the Ground as directed in the firſt Way of Laying.

5thly, Cut a Place round about the Bough (that is deſign'd to be laid) an Inch or two, at the Place that is moſt convenient to lay into the Ground, and manage it as is directed in the firſt Method of Laying.

The Seaſon for laying Hardy Trees that ſhed their Leaves, is in *October*; but for ſuch as are tender, in *March*, for Ever-greens, *June* or *Auguſt* are good Seaſons.

Though *Layers* may be laid at any Time in the Year, yet thoſe Seaſons before-mention'd are moſt proper, for the Reaſons following; becauſe they have the whole Winter and Summer to prepare and draw Root; for at theſe Times of the Year the Sun has ſufficient Power on the Sap of the Tree to feed the Leaf and Bud; but has not Power ſufficient to make a Shoot.

And if that ſmall Quantity of Sap that does ariſe be hindred, as it will by ſome of the preceding Ways of *Laying*, the Leaves and Buds will gently crave of the *Layer*, and by that Means will prepare the *Layer* to take Root, or put forth Roots a little to maintain itſelf, finding it cannot have it from the Mother-Plant.

And therefore, becauſe it wants but little Nouriſhment at that Time of the Year, it is better to lay *Layers* of Trees, or to ſet *Cuttings*, than at other Times, either in the Winter when the Sap ſtirs but little, or in the Summer when the Sap abounds, or in the Spring when it begins to riſe, becauſe it is then apt to come too ſuddenly to draw Sap from the *Layer*, before the *Layer* has drawn or prepared for Root.

However the Spring or Summer may do well for ſmall Plants, becauſe ſuch Plants being but ſhort-liv'd, draw Root the quicker.

If you would lay young Trees from an high Standard, the Boughs of which cannot be bent down to the Ground, then you muſt make uſe of Ozier-Baskets, Boxes or Pots, filled with fine ſifted Mould, mix'd with a little rotten Willow-duſt, which will keep Moiſture to aſſiſt the *Layer* in taking Root: This Basket, Box, *&c.* muſt be ſet upon a Poſt or Treſſel, *&c.* and the Bough muſt be laid according to either of the four firſt Ways of *Laying*; but too much Head muſt not be left on, leſt that be injured by the Wind, or by its own Motion rub off the the tender Root; and the ſmaller the Boughs are, the leſs Way they ſhould be ſet out of the Ground, and Care muſt be taken to keep them clear from Weeds.

The harder the Wood is, the better will the young Wood take Root; but if the Wood be ſoft, the older Boughs will take Root the beſt.

LEAVES are defined to be a Part of a Plant extended into Length and Breadth, in ſuch a Manner as to have one Side diſtinguiſhable from the other; they are properly the moſt extreme Part of a Branch, and the Ornament of the Twigs, and conſiſt of a very glutinous Matter, being furniſhed every where with Veins and Nerves; one of their Offices is to ſubtilize and give more Spirit to the Abundance of nouriſhing Sap, and to convey it to the little Buds.

LEEKS; *vide* Porrum.

LEMON-TREE; *vide* Limon.

LENS; Lentils.

The *Characters* are;

It hath a papilionaceous Flower; the Pointal of which becomes a ſhort Pod, containing orbicular Seeds, which are, for the moſt Part, convex; to which may be added, the Leaves are conjugated, growing to one Mid-rib, and are terminated by Tendrils.

The *Species* are;

1. Lens; *vulgaris. C. B. P.* Common Lentils.
2. Lens; *major. C. B. P.* Greater Lentils.

3. Lens; *monanthos. H. L.* Lentils, with a ſingle Flower.

There are ſeveral Varieties of the firſt and ſecond Sorts, which differ from each other in the Colour of their Flowers and Fruits; but theſe are accidental, and will often ariſe from the ſame Seeds, for which Reaſon they are not worth obſerving in this Place.

Theſe Plants are very common in the warm Parts of *Europe*, and in the *Archipelago*, where they are the Food of the poorer Sort of People, which they loath when they meet with better Fare; from whence came the Proverb, *Dives factus jam deſiit gaudere Lente:* which is apply'd to ſuch as ſpurn at thoſe Things in eaſy Circumſtances, which they were glad of in a low Condition.

Theſe Plants are one of the leaſt of the *Pulſe* Kind, and call'd in ſome Places *Tills:* They may be propagated in the ſame Manner as *Vetches*, &c. but muſt be ſown a great deal thinner: They will grow upon a dry barren Soil beſt, and are a very good Fodder for Cattle; but as they require an annual Culture, ſo they are not at preſent very much eſteem'd: Their Seeds are very good for Pigeons.

LENS PALUSTRIS; Duck-Meat. This is a very common Plant, growing upon ſtanding Waters in moſt Parts of *England*.

LENTISCUS; The Maſtick-Tree.

The *Characters* are;

The Leaves are pinnated; the Lobes growing oppoſite, and are faſten'd to one common Mid-rib; the Male Flowers, which are produced upon ſeparate Trees from the Fruit, have ſhort, green, quadrifid Cups, which expand in Form of Stars, having four or five ſhort Stamina, with large red Apices: Theſe Flowers are collected into a Bunch: The Ovary, in the Female Plants, which grows upon the Top of a long, thick Foot-ſtalk, is commonly branch'd, and becomes a Fruit which contains a Nut with a hard Shell.

The *Species* are;

1. Lentiscus; *vulgaris. C. B. P.* Common Maſtick-Tree.

2. Lentiscus; *vulgaris, foliis minoribus & pallidioribus. H. L.* The Male Maſtick-Tree, with leſſer and paler Leaves.

Theſe two Plants are promiſcuouſly preſerv'd in many curious Gardens in *England*, where they are commonly kept in Pots and Tubs, and hous'd in the Winter, with *Oranges*, *Myrtles*, &c. but in ſome Places, which are well defended from cold Winds, I have obſerv'd them growing in the open Air, without ſuffering the leaſt Injury from our ordinary Winters; but in extreme hard Weather they are ſometimes greatly damag'd; however, as they are ſeldom quite deſtroy'd, eſpecially if the Plants are ſtrong, and have taken good Root in the Ground, ſo it is worth our Care to endeavour to naturalize them to our Climate: which may eaſily be effected, provided you keep them in Pots, until they have acquir'd a ſufficient Strength, and then ſhake them out in the *Spring* of the Year, preſerving as much of the Earth to their Roots as you can, planting them on a dry warm Soil, and in a well-ſhelter'd Situation, and in Winter lay ſome Mulch upon the Surface of the Ground about their Roots, to prevent the Froſt from penetrating to them, as alſo in very ſevere Froſts you ſhould cover their Stems and Heads with ſome Straw or Peas Haulm, which will prevent their being deſtroy'd, and after they have been inured to the open Air for two or three Years, they will then be moſtly out of Danger, and will grow much better than thoſe Plants, which are kept in Pots or Tubs.

Theſe Plants are propagated by laying down their young Branches in the Spring, which ſhould be ſlit at a Joint (as is practis'd in laying *Carnations*) and in dry Weather they muſt be frequently watered to encourage their ſtriking Root, which they rarely do until the ſecond Year, before which they ſhould not be diſturb'd; but then if they have taken ſufficient Root, they ſhould be tranſplanted in *April*, placing them, as was before directed, into a warm Situation, obſerving to water them in dry Weather, as alſo to lay ſome Mulch about their Roots to prevent the Ground from drying too faſt; and in Winter lay a little freſh Mulch about them to keep out the Froſt; after two or three Years, they will be ſufficiently hardy, and will require no farther Care, but to dig the Ground about them every Spring, and keep them clean from Weeds, as alſo to trim up the lateral Branches, to make them aſpire in Height; but by no Means ſhould you ſheer them into Balls and Pyramids (as is the common Practice) but let them grow in their utmoſt Luxuriancy, in which Manner they will appear much more beautiful than in thoſe ſtudied Figures.

Theſe Plants may alſo be propagated from the Berries, which may be obtained from the Southern Parts of *France* or *Spain*, where they grow in great Plenty; they muſt be ſown in Pots or Tubs of light freſh Earth, and houſed in Winter (for the Plants ſeldom come up until the ſecond Year) but in Summer they ſhould be expoſed in a warm Situation, and often refreſh'd with Water; when the Plants come up they muſt be carefully clear'd from Weeds, and refreſh'd with Water in dry Weather, and in Winter the Pots or Tubs muſt be removed into Shelter, but ſhould have a great Share of free Air in mild Weather; and the *Spring* following the Plants ſhould be taken up, and each of them planted into a ſeparate Pot, then plunge the Pots into a moderate Hot-bed to facilitate their taking Root, after which they may be expos'd to the open Air (as was directed for the older Plants) and continue to houſe them every Winter, until they are three or four Years old, after which they may be planted into the open Air, when they muſt be treated as the old Plants.

Theſe Trees are always Green, which renders them more valuable, and their Leaves being of a beautiful Figure, and their Heads generally growing very regular, renders them worthy of a good Situation; they ſeldom riſe above twelve or fourteen Feet high with us, and ſhould therefore be intermix'd with other Ever-greens of the ſame Growth.

LEONTOPETALON; Lion-Leaf.

The *Characters* are;

It hath a thick tuberoſe perennial Root; the Flower is naked, and conſiſts of five or ſix Petals which expand in Form of a Roſe, garniſh'd with five Stamina; in the Middle of the Flower riſes the Pointal, which afterwards becomes a Bladder, containing many ſpherical Seeds.

We have but one Species of this Plant in the *Engliſh* Gardens, which is,

LEONTOPETALON; *foliis coſtæ ramoſæ innaſcentibus. Flor.* Lion-leaf, with Leaves growing on a branched Rib.

This Plant is found in great Plenty in the Iſlands of the *Archipelago*, and alſo in ſome Parts of *Italy*, but at preſent is very rare in *England*; it may be propagated by ſowing the Seeds, or parting of the Roots; but the former is the beſt Method, if the Seeds could be obtained from Abroad; for they ſeldom produce good Seeds in *England*, nor do they increaſe very faſt by their Roots.

The Seed of this Plant ſhould be ſown ſoon after it is ripe, in Pots or Tubs fill'd with freſh light Earth, that the Plants may be removed into Shelter in the Winter, for if they are expos'd at that Seaſon (which is the Time they do ariſe) the Cold will deſtroy them; but in the *Summer* they ſhould be ſet abroad, where they may have the Morning Sun until Ten of the Clock, and when the Plants are ſtrong enough to be tranſplanted, they ſhould be each of them put into a ſeparate Pot, and in *Winter* placed into a Hot-bed Frame, where they may be ſhelter'd in ſevere Froſts; but in mild Weather they ſhould be expos'd to the open Air.

When the Plants are two Years old, they may be taken out of the Pots and planted into a warm Border under a South Wall, where they will endure the Cold of our ordinary Winters very well, being ſeldom hurt by ſevere Froſts, or too much Wet; for which Reaſon they ſhould always be planted in a dry Soil.

The beſt Seaſon for tranſplanting theſe Roots is in *May*, when their Leaves are decay'd; for if you defer it till *July* or *Auguſt*, they will be ſtriking out new Fibres, when they will not be ſo ſafely removed: They produce their Flowers in Winter, for which they are chiefly valued.

LEONURUS; Lion's-Tail.

The *Characters* are;

It is one of the verticillate Plants with a lip Flower, which conſiſts of one Leaf, whoſe Galea or Creſt is imbricated, and much longer than the under Lip, which is divided into three Segments; out of the Flower-cup riſes the Pointal fix'd like a Nail to the hinder Part of the Flower, ſurrounded by four Embryo's, which afterwards turn to ſo many Seeds, which are oblong, and encloſed in a long fiſtulous Husk, which before was the Flower-cup.

The *Species* are;

1. LEONURUS; *perennis, Africanus, ſideritidis folio, flore phœnicio majore. Breyn. prod.* Perennial African Lion's-Tail, with an Ironwort Leaf, and a large ſcarlet Flower.

2. LEONURUS; *perennis, Africanus, ſideritidis folio, variegato, flore phœnicio majore.* Perennial African Lion-Tail, with a variegated Ironwort Leaf, and a large ſcarlet Flower.

3. LEONURUS; *minor, Capitis Bonæ Spei vulgò. Boerh. Ind.* Leſſer Lion's-tail from the *Cape of Good Hope*, with a Cat-mint Leaf.

Theſe Plants are very great Ornaments in a Green-houſe, producing large Tufts of beautiful ſcarlet Flowers in the Months of *October* and *November*, when few other Plants are in Perfection, for which Reaſon a good Green-houſe ſhould never be wanting of theſe Plants, eſpecially ſince they require no artificial Heat, but only to be preſerved from hard Froſts, ſo that they may be placed amongſt *Oranges*, *Myrtles*, *Oleanders*, &c. in ſuch a Manner, as not to be too much over-ſhaded with other Plants; but that they may enjoy as much free Air as poſſible in mild Weather.

They are eaſily propagated by planting Cuttings of any of the Sorts, in Pots fill'd with light Earth, any Time in *July* or *Auguſt*, obſerving to ſhade and water them until they have taken Root, after which they muſt be each of 'em planted into a ſeparate Pot fill'd with light rich Earth, and often refreſh'd with Water (for it is an Aquatick Plant in its native Country) and in *October* they muſt be removed into the Green-houſe; but in *May*, they ſhould be expos'd again to the open Air, placing them where they may have the Morning Sun till Eleven of the Clock, obſerving never to let them want Water, which will encourage them to produce ſtrong Tufts of Flowers in *Autumn*.

Theſe Plants will grow to be eight or nine Feet high, and abide many Years; but are very ſubject to grow irregular, therefore their Branches ſhould be pruned early in the *Spring*, in order to reduce them to a tolerable Figure; but they will not bear to be often pruned or ſheer'd, nor can they ever be form'd into Balls or Pyramids, for if they are often ſhorten'd, it will prevent their flowering.

The ſtrip'd Sort is by many People valued for the Variety of its Leaves; but as that is occaſion'd by a Weakneſs in the Plant, ſo the Flowers of that Sort are never ſo large and fair, as are thoſe of the plain Sort, nor produced in ſo great a Quantity.

The third Sort is alſo preſerved for Variety more than its Beauty; the Flowers of this being much ſmaller, and not ſo well colour'd, as are thoſe of the common Sorts.

LETTUCE; *vide* Lactuca.

LEUCANTHEMUM; Ox-eye Daizy.

The *Characters* are;

It agrees in every reſpect with the Chryſanthemum, *except in the Colour of its Semi-florets, which in theſe are conſtantly White.*

The *Species* are;

1. Leucanthemum; *vulgare Tourn.* Common Ox-eye Daizy.

2. Leucanthemum; *Alpinum, majus, rigido folio. Tourn.* Greater Ox-eye Daizy of the *Alps*, with ſtiff Leaves.

3. Leucanthemum; *radice repente, foliis latioribus ſerratis. Tourn.* Creeping-rooted Ox-eye Daizy, with broad ſerrated Leaves.

4. Leucanthemum; *folio abſinthii, Alpinum. Ciaſſi.* Alpine Ox-eye Daizy, with a *Wormwood* Leaf.

5. Leucanthemum; *tanaceti folio, flore majore. Boerh. Ind.* Ox-eye Daizy, with a *Tanſy* Leaf and a large Flower.

6. Leucanthemum; *Canarienſe, foliis Chryſanthemi, ſapore pyrethri. Tourn.* Canary Ox-eye Daizy, with a Chryſanthemum Leaf, and a Taſte like *Pellitory* of *Spain*, vulgarly called *Pellitory of Spain*.

The firſt of theſe Plants is very common in the Meadows, in moſt Parts of *England*, from whence the Flowers are gathered and brought into the Markets of *London* for medicinal Uſes, but it is ſeldom cultivated in Gardens.

The ſecond and fifth Sorts are many Times planted in Gardens for their Beauty; theſe produce large Tufts of white radiated Flowers upon the Summits of their Stalks, which continue a long Time in Beauty; they commonly grow two Feet high or more, for which Reaſon they ſhould always be placed in the Middle of large Borders, and require to be planted at a good Diſtance from other Plants, otherwiſe they will over-bear them; ſo that they are not very proper for ſmall Gardens, taking up too much Room.

Theſe are very hardy Plants, and may be propagated either by ſowing their Seeds, or parting their Roots; the beſt Time for ſowing of their Seeds, is in *March*, upon a Border of light freſh Earth, and when the Plants are come up pretty ſtrong, they muſt be tranſplanted into freſh Borders of the like Earth, placing them at eight Inches Diſtance each Way; in theſe Borders they may remain till *Michaelmas*, when they ſhould be removed into the Borders where they are to continue, and the Summer following they will produce Flowers and Seeds.

But if you would propagate them by parting their Roots, the beſt Seaſon for this Work is in *September* or *October*; for if it be done in the *Spring*, they ſeldom flower ſo ſtrong the ſucceeding *Summer*.

The third Sort multiplies too faſt by its creeping Roots, which will ſpread and come up at a great Diſtance from the old Plant, ſo that it is hardly to be kept within tolerable Bounds; but is very apt to run over whatever Plants ſtand near, for which Reaſon it ſhould never be placed amongſt choice Flowers, but allowed a Place in ſome abject Part of the Garden, in a Corner allotted to it, where it will grow to the Height of four Feet, and produce large radiated white Flowers in *Auguſt* and *September*.

The fourth Sort is ſeldom admitted into curious Flower-Gardens, it being a rambling Plant, and the Branches trailing upon the Ground, renders it unſightly, nor are the Flowers very beautiful; ſo that it is ſeldom preſerved but in Botanick Gardens.

Theſe are all very hardy Plants, and will grow in almoſt any Soil or Situation, and there being very little Trouble in their Culture, they deſerve Room in all large Gardens.

The ſixth Sort is tenderer than any of the former, and muſt be preſerved in Pots and ſheltered in the Winter. This is propagated by planting Cuttings in any of the Summer Months, into a Border of light Earth, obſerving to water and ſhade them from the great Heat of the Sun until they have taken Root, after which they muſt be planted into Pots fill'd with light freſh Earth, and expos'd to the open Air until the Middle or latter End of *October*, when they muſt be houſed; but ſhould be placed into the cooleſt Part of the Houſe, where they may have much free Air in mild Weather, and muſt be frequently refreſh'd with Water; but in *Summer* Time they may be expos'd to the open Air, in a ſhady Situation, where they will thrive much better than if expos'd to the Sun, which would dry the Earth too faſt, ſo that they would conſtantly require to be watered.

This Plant is not apt to continue above two or three Years without renewing, therefore Cuttings ſhould be planted every other Year, to maintain the Kind, where

People are curious to preſerve their Varieties: There is no great Beauty in this Plant, but it is preſerved in ſome Gardens, for the true *Pellitory of Spain*, which in reality is a different Plant, though this has a very ſharp acrid Taſte, much like that of the *Pellitory*.

LEUCOJUM; Stock-Gilli-flower.

The *Characters* are;

The Flower is compoſed for the moſt Part of four Leaves, which are placed in Form of a Croſs; out of the Flower-cup riſes the Pointal, which becomes a long flat Pod, divided into two Cells by an intermediate Partition, to which the Valves adhere on both Sides, and are furniſh'd with flat ſmooth Seeds, which are orbicular and border'd round their Edges; to which may be added, the Flowers are ſpecious and ſweet-ſmelling.

The *Species* are;

1. LEUCOJUM; *incanum, majus. C. B. P.* Great hoary Stock Gilli-flower, with ſingle white Flowers.

2. LEUCOJUM; *incanum, majus, flore cinericeo. C. B. P.* The great hoary Stock-Gilli-flower, with an Aſh-colour'd Flower.

3. LEUCOJUM; *purpureum, vel rubrum. C. B. P.* Purple or Red Stock-Gilli-flower.

4. LEUCOJUM; *incanum, majus, coccineum. Mor. Hiſt.* The greater hoary crimſon Stock-Gilli-flower, vulgarly call'd the *Brumpton* Stock.

5. LEUCOJUM; *violaceum. Tabern.* Violet-coloured Stock-Gilli-flower.

6. LEUCOJUM; *incanum, majus, multiplex, flore purpureo. C. B. P.* Greater hoary Stock-Gilli-flower, with a double purple Flower.

7. LEUCOJUM; *incanum, majus, multiplex, flore rubro. C. B. P.* Greater hoary Stock-Gilli-flower, with a double red Flower.

8. LEUCOJUM; *incanum, majus, multiplex, flore albo. Tourn.* Greater hoary Stock-Gilli-flower, with a double white Flower.

9. LEUCOJUM; *incanum, majus, variegatum, pleno flore. C. B. P.* The greater hoary Stock-Gilli-flower, with a double variegated Flower.

10. LEUCOJUM; *majus, incanum, variegatum, album, flore ſimplici, maculis in albo rubris. C. B. P.* The greater hoary Stock Gilli-flower, with a ſingle white Flower ſpotted and ſtrip'd with Red.

11. LEUCOJUM; *pleno flore, album, ſanguineis maculis ſignatum. Hort. Eyſt.* White Stock-Gilli-flower, with a double Flower, mark'd with bloody Spots.

12. LEUCOJUM; *pleno flore, album, purpureis maculis ſignatum. Hort. Eyſt.* White Stock-Gilli-flower, with a double Flower mark'd with purple Spots.

13. LEUCOJUM; *incanum majus, variegatum, pleno flore, foliis in ambitie argenteis. H. L.* The greater hoary, variegated Stock-Gilli-flower, with a double Flower, and Leaves edg'd with Silver.

14. LEUCOJUM; *minus & annuum. Dod.* Leſſer annual Stock-Gilli-flower.

15. LEUCOJUM; *album, odoratiſſimum, folio viridi. C. B. P.* The moſt ſweet-ſmelling Stock-Gilli-flower, with a green Leaf, commonly call'd the *White Wall-flower*.

16. LEUCOJUM; *album, odoratiſſimum, folio viridi, pleno flore.* The double white Wall-flower; *vulgo*.

17. LEUCOJUM; *luteum, vulgare. C. B. P.* The common yellow Wall-flower.

18. LEUCOJUM; *luteum, flore pleno, minus. C. B. P.* The common double Wall-flower.

19. Leucojum; *anguſtifolium, Alpinum, flore ſulphureo. H. R. Par.* Narrow-leav'd Alpine Wall-flower, with a Brimſtone-colour'd Flower.

20. Leucojum; *anguſtifolium, Alpinum, flore pleno, ſulphureo.* Narrow-leav'd Alpine Wall-flower, with a double Brimſtone-colour'd Flower, commonly call'd the *Straw-colour'd Wall-flower.*

21. Leucojum; *luteum, magno flore. C. B. P.* Wall-flower, with a large Flower.

22. Leucojum; *luteum, flore pleno, majus. C. B. P.* The greater Wall-flower, with a double Flower.

23. Leucojum; *majus, flore intus luteo extus, ferrugineo.* Greater Wall-flower, with larger Flowers, Yellow within, and on the Outſide of an Iron-colour, commonly call'd the *Ravenal Wall-flower.*

24. Leucojum; *majus, flore majore, pleno, intus luteo, extus ferrugineo.* The double Ravenal; *vulgò.*

25. Leucojum; *majus, flore pleno ferrugineo. Tourn.* The old double bloody Wall-flower.

26. Leucojum; *luteum, pleno flore, foliis ex luteo variegatis.* The yellow variegated Wall-flower, with a double Flower.

27. Leucojum; *luteum, pleno flore, foliis ex albo eleganter variegatis.* The Silver-ſtrip'd Wall-flower, with a double Flower.

There are ſeveral other Varieties of theſe Flowers, which are preſerv'd in ſome curious Botanick Gardens; but thoſe here-mention'd, are the moſt beautiful, and beſt worth propagating, in all curious Flower-Gardens.

All the Sorts of *Stock-Gilli-flowers* are propagated by Seeds: The beſt Time for Sowinng 'em is in the Beginning of *April,* upon a Border of freſh light Earth, where they may be expos'd to the Morning Sun; for if they are too much expos'd to the Sun in the Heat of the Day, they are very ſubject to be eaten by a Sort of Fly, as they often are while young, upon a hot dry Soil: To remedy which, you ſhould always ſow a few *Radiſhes* amongſt them, which will ſecure 'em from this Miſchief; for the Flies will always prey upon the *Radiſhes,* whereby you *Gilli-flower* Plants will be preſerved; but then you muſt not ſuffer the *Radiſhes* to be too thick amongſt them, for that would draw 'em up very weak, and cauſe 'em to be long-ſhank'd. When your Plants have gotten ſix Leaves, they muſt be tranſplanted into other Borders of the like freſh Earth, and expos'd to the Morning Sun at about four Inches Diſtance, obſerving to water and ſhade 'em until they have taken Root; after which, they will require no farther Care, than only to keep them clear from Weeds until the Latter-end of *Auguſt,* or the Beginning of *September,* when you muſt tranſplant them into the Borders of the Pleaſure-Garden; which ſhould be done, if poſſible, in moiſt Weather, that they may the ſooner ſtrike Root, whereby they will be ſecurely faſten'd in the Ground before the Froſt comes on, which would prevent their taking Root, and thereby either quite deſtroy them, or at leaſt cauſe 'em to flower very weak the ſucceeding Spring.

There are many People who make a great Stir about ſowing theſe Seeds, and tranſplanting the Plants always at the ſame Time when the Moon is at the Full, in order to obtain a greater Number of double Flowers; but from ſeveral Years Obſervation, I could never obſerve any thing in this Management, nor from the frequently removing the Plants, as is by ſome directed, which only weakens them, and cauſes 'em to produce ſmaller Bunches of Flowers; but I could not find any more of them come double by this Management, than if they had never been remov'd: But the beſt Method that I have obſerv'd, to have theſe Flowers in the greateſt Perfection, is to change the Seeds every Year, if you can procure a good Correſpondent at ſome Place at a great Diſtance from you, who will faithfully furniſh you with good Seeds: And in ſaving theſe Seeds, if you obſerve a greater Number of Petals than uſual in the ſingle Flowers, it is a good Sign that the Seeds of ſuch Plants will produce double Flowers.

As theſe Plants are commonly biennial, and ſeldom continue longer than the ſecond Year, ſo there will be a Neceſſity of ſowing Seeds every Year; for when they have flower'd and ſeeded, they commonly decay ſoon after, as alſo do the Double Flowers ſoon after they are out of flower; or if ſome of them ſhould continue another Year, they are ſeldom ſo ſtrong, or produce ſo fair Flowers as the young ſeedling Plants: ſo that, upon the Whole, they are ſcarcely worth ſtanding. And tho' ſome People recommend the Propagating the Double Sorts from Slips and Cuttings, as the ſureſt Way to have Double Flowers, which indeed is very true; yet the Plants thus rais'd are always weaker than thoſe rais'd from Seeds, and never produce their Flowers near ſo large or fair: Wherefore, (as I ſaid before) it is better to have a Succeſſion of Seedling Plants every Year, amongſt which you will always have a Quantity of Double Flowers, provided your Seed be good.

The *Brompton* Stock-Gilli-flower is by many People moſt valu'd, for the Largeneſs of its Flowers, and the Brightneſs of their Colour: but this Sort ſeldom produces more than one Spike of Flowers upon a Plant; whereas the *Italian* and *Purple* Sorts produce ſeveral very fair Bunches upon each Plant, eſpecially if they have Strength: And there is a Sort commonly call'd the *Stock-major*, (which, probably, is the ſeventh Sort here mention'd) which branches out on every Side, and produces many fair Spikes of Flowers from one Root; theſe are of a beautiful Red Colour: As doth another Sort, commonly (tho' falſely) call'd the *Annual Stock*, which will produce its Flowers the firſt Year from Seed; but then the Plants commonly continue the next Seaſon, and flower again very ſtrong, and theſe often produce ſome Variety in the Colour of their Flowers, ſome being of a beautiful Scarlet, and others of a pale Red Colour, and ſome of them are finely variegated; and theſe all produc'd from Seeds taken from the ſame Plant: but this Sort is very apt to degenerate, if the Seeds are not frequently changed.

The ſmall Annual Stock-Gilliflower will produce Flowers in about ten Weeks after ſowing, (which has occaſion'd its being call'd the *Ten Weeks Stock*); and if the Seaſon be tolerably cool and moiſt, theſe Flowers will be very large: And many times there are large Double Flowers produc'd amongſt them, which renders them well worth propagating, eſpecially if you ſow them in *May*, which will cauſe them to flower in *Auguſt* and *September*, when Flowers are beginning to be ſcarce in the Gardens. Theſe Plants produce ripe Seeds the ſame Year, and rarely ſurvive a Winter.

Theſe Plants ſhould all be planted in a freſh light Soil, which muſt not be dung'd; for they don't do ſo well upon a rich Soil, in which they are apt to grow very rank, and then their Roots canker and decay; ſo that they ſeldom abide the Winter in ſuch Soils; but in a freſh Soil; they will ſtand our ordinary Winters extremely well, and will produce large fair Flowers.

The common Single *Wall-flower* is very ſeldom cultivated in Gardens, but is often found growing upon old Walls and Buildings in divers Parts of *England:* This is the Sort which is directed in the College *Diſpenſatory* for medicinal Uſes. But the Double of this Kind is very common in moſt of the *Engliſh* Gardens, which is propagated by planting Slips or Cuttings in any of the Spring Months, obſerving to water and ſhade them until they have taken Root; after which, they may be remov'd to the Places where they are to remain.

The Straw-colour'd *Wall-flower* with Double Flowers was formerly more common in the *Engliſh* Gardens than at preſent: This is a much finer Sort for Shew than the Common, the Plants generally growing more upright; and the Spikes of Flowers are much larger, and grow much cloſer together than thoſe: but the Flowers have very little Scent; which, I ſuppoſe, has occaſion'd its being leſs cultivated than it was formerly; tho' indeed, for Shew, it is inferior to none of the Sorts of *Wall-flowers:* This is alſo propagated by Slips, as the Common Sort.

The White *Wall-flower* is propagated by ſowing the Seeds in *April,* in the manner before directed for the *Stock-Gilli-flowers;* and if the Seeds are good, there will be many Double Flowers produc'd amongſt them, which may be continu'd, by planting the Slips in the ſame manner as hath been directed for the common *Wall-flower.* But the Double of this Kind being ſomewhat tenderer than the other Sorts of *Wall-flowers,* ſhould be planted into Pots fill'd with light freſh Earth, and in the Winter-ſeaſon ſhould be plac'd under a Hot-bed Frame, where they may be ſhelter'd from ſevere Froſts; but in mild Weather they ſhould have as much free open Air as poſſible; in which Management they will endure two or three Years, and produe fair Flowers.

The large Flowering *Wall-flower* is alſo propagated by Seeds in the ſame manner as the *Stock-Gilli-flowers;* for tho' it will grow from Slips, yet theſe ſeldom make ſo good Plants as thoſe produc'd from Seeds, nor will they flower ſo ſtrong. This Sort rarely produces many Double Flowers, but yet is well worth propagating, for the Largeneſs and Sweetneſs of its Flowers; and if they are planted in a very poor dry Soil, will continue two or three Years, and endure the Cold extremely well.

The *Ravenal Wall-flower* is at preſent in the greateſt Eſteem with the curious Floriſts, the Flowers of this Kind being full as large as the laſt-mention'd Sort, and are of a fine Reddiſh or Iron Colour on the Outſide, as alſo of an extraordinary Sweetneſs; and this is more apt to produce Double Flowers than the former: It is propagated by Seeds, which ſhould be ſown in *March,* and manag'd as was directed for the *Stock-Gilli-flower,* obſerving never to plant them in a rich Soil, which will cauſe them to grow very faſt, during the Summer-ſeaſon; but they ſeldom endure the Winter in ſuch Soils. The Double-flower'd Plants of this Kind may alſo be propagated by Slips, in the ſame manner as the before-mention'd Sorts; but theſe ſhould be ſhelter'd in Winter, as was directed for the white *Wall-flower*, otherwiſe they are ſubject to be kill'd by very ſharp Froſts. The Seeds of this Kind ſhould be often chang'd, or elſe they will greatly degenerate.

The old Double Bloody *Wall-flower* was formerly more common in *England* than at preſent, it being at this Time rarely to be ſeen: This is a Variety of the common Double *Wall-flower*, from which it only differs in having the Outſide of the Petals of a Bloody Colour: It may be propagated by Slips, as the common Sort; but requires to be ſhelter'd from extreme Cold in the Winter, which often deſtroys theſe Plants if they are too much expos'd to it.

The Yellow-ſtrip'd *Wall-flower* is alſo a Variety of the common Double Sort, having its Leaves beautifully variegated in the Spring and Winter-ſeaſon; but in the Summer, when the Plants are very free of Growth, they degenerate to be almoſt quite plain, ſo that at that Seaſon there is very little Beauty in them: This is alſo propagated by Slips, as the Common Sort; but ſhould be planted in a warm Situation, otherwiſe it will often ſuffer by great Colds in Winter.

The Silver-ſtrip'd *Wall-flower* is much more beautiful than the laſt, and generally retains its beautiful Variegation through the whole Year. This is propagated by Slips, as the former; but ſhould be ſhelter'd in Winter, being much tenderer than the laſt; for which Reaſon, the Plants ſhould be ſet into Pots, and treated as the Double White *Wall-flower*: but you ſhould obſerve, never to plant them in a rich Soil, which will cauſe them to become plain, (as I have often obſerv'd) nor ſhould they have too much Moiſture, which very often deſtroys 'em.

All the Sorts of *Wall-flowers* will abide the Cold much better if planted in a very gravelly and ſtony Soil, than when they are in a rich Earth, as may be obſerv'd by thoſe which grow upon the Tops of Walls, and other Buildings, where ſometimes they are very much expos'd to the cold Winds, and yet often endure the ſharpeſt Winters; when thoſe which were planted in a good Soil have been deſtroy'd, notwithſtanding they have a warm Situation.

LEVEL, a Mathematical Inſtrument ſerving to draw a Line parallel to the Horizon, not only for various Uſes in Maſonry, *&c.* but alſo to meaſure the Difference of Aſcent and Deſcent between ſeveral Places, for the Conveying of Water, Draining of Fens, *&c.*

A *Water Level* ſhews the Horizontal Line, by means of a Surface of Water, or other Liquid, founded on this Principle, that Water always naturally places itſelf *level*.

The moſt ſimple Inſtrument for this Uſe, is made of a long wooden Trough or Canal whoſe Sides are parallel to its Baſe; ſo that being equally fill'd with Water, the Surface thereof ſhews the Line of *Level*.

This *Level* is alſo made with two Cups fill'd to the two Ends of a Pipe three or four Feet long, about an Inch in diameter; by means whereof, the Water communicates from the one to the other Cup; and this Pipe being moveable on its

Stand, by means of a Ball and Socket, when the two Cups become equally full of Water, the two Surfaces mark the Line of *Level*.

Inſtead of Cups, this Inſtrument may be made with two ſhort Cylinders of Glaſs three or four Inches long, faſten'd to each End of the Pipe with Wax or Maſtick; then the Pipe being fill'd either with common or colour'd Water, will ſhew itſelf through the Cylinder, by means of which the *Line of Level* is determin'd; the Height of the Water, with reſpect to the Centre of the Earth, being always the ſame in both Cylinders. This *Level* is very commodious in Levelling ſmall Diſtances.

If you would level any Piece of Ground that you can ſee from Side to Side, or from the Middle to any Side, ſet up your Inſtrument in the Middle of it, whether it be a *Water Level* or a *Ground Level* with Sights: Place it ſo high, that you may ſee over the higheſt Part of the Ground half a Foot, or a Foot; then ſet up a Stake in the Middle, ſo that the Top may be exactly level with the Sights, and another Stake on the higeſt Side, the Top of which muſt be level with the middle Stake: Then either turn the *Level* or Look-back Sight, and ſet up another Stake on the Lower Ground level with the two firſt; ſo then you will have three Stakes ſtanding in a *Level*.

Then keeping your *Level* true to the middle Stake, turn it 'till it makes Right Angles with the three Stakes, and ſet up two Stakes on each Side one *Level* with thoſe three: ſo that then you will have five Stakes in two Lines ſet true *Level*.

If the Ground be large, you may ſet up two Rows more by the *Level*; but five Stakes are enough in a ſmall Ground.

When this is done, you may lay your *Level* aſide, and look over the the Head of one to the Head of another, and cauſe the Perſon who aſſiſts you to put down Stakes between two and two, 'till you have ſet as many Stakes *Level* in the Ground as you think convenient; or you may uſe a Rule, which being plac'd level with the Head of the Stake, you may look over that to the Head of the other, and put Stakes down between you and the other Stake to what Number you pleaſe.

The Ground being thus ſtaked out, with all the Stakes Heads level, and half a Foot higher than the higheſt Ground, in ſome Grounds the middle Stake and the Stakes in the Croſs-Line will be the Level-Line the Ground muſt be brought to; that is, abating the Hill, and filling up the Low Side to the *Level* of the Mid-Line. But if the Ground be very uneven, then you muſt meaſure over all the Stakes, and take them middle high for their Mean-*Level*, and by the *Rule of Three*, proportion your Ground to that.

As for Inſtance: If a Valley be ten Poles in length, and two Feet in depth from the ſtrait Line, and there be a Hill five Poles long; How many Feet deep muſt a Perſon ſink thoſe five Poles to fill up the Valley? This Queſtion may be reſolv'd by the Inverſe or Back *Rule of Three*, and will ſtand thus: As 5 is to 2, ſo is 10 to 4.

5——2——10
2
——
5)20(4

So that a Perſon muſt go four Feet deep in ſuch a Hill to make good ſuch a Valley.

If you are to abutt the Top of a Hill four Feet deep, and two Poles from the Top of that Hill, thoſe four Feet are to come out.

To perform this, ſet up a Stake on the Top of a Hill two or three Feet above-ground, and another of the ſame Height where the Depth comes out; ſet down a Stake three Rods from that, till the Head comes to be in a Line with theſe two, and at that Stake you muſt be one Foot deep.

At ſix Poles, ſtake down another, as before, and there you muſt be two Feet deep: Then ſtake down another at nine Poles, and there you muſt be three Feet deep; and you may ſet more Stakes at equal Diſtances, which will direct you ſo as that you cannot go amiſs.

LIGUSTICUM; Loveage.

The *Characters* are;

The Lobes of the Leaves are cut about their Borders, like thoſe of Parſley; *the Flowers conſiſt, for the moſt part, of five Leaves, which expand in Form of a Roſe; each of theſe Flowers are ſucceeded by two oblong, gibboſe furrow'd Seeds, which on one Side have a leafy Border.*

The *Species* are;

1. Ligusticum; *vulgare, foliis Apii. J. B.* Common Loveage.

2. Ligusticum; *Scoticum, Apii folio. Tourn.* Scotch Loveage, with a Parſley Leaf.

3. Ligusticum; *Græcum, Apii folio. T. Cor.* Greek Loveage, with a Parſley Leaf.

The firſt of theſe Plants is often us'd in Medicine, and was formerly reckon'd amongſt the Kitchen Herbs, but is now almoſt intirely caſt out of the Kitchen-Garden, and only cultivated for Phyſical Uſes: This Plant may be eaſily propagated by ſowing the Seeds, ſoon after they are ripe, in a moiſt Spot of Ground; and when the Plants come up the Spring following, they ſhould be tranſplanted out to the Diſtance of eighteen Inches or two Feet aſunder, in a moiſt Soil; where, if they are kept clear from Weeds, they will thrive exceedingly, and the ſecond Summer will produce Seeds: But the Herb may be frequently cut for Uſe, their Roots abiding ſeveral Years, do ſhoot again continually after being cut; ſo that a few Plants will be ſufficient for the Uſe of a Family.

The ſecond and third Sorts are only preſerv'd in Collections of Plants for Variety, but are not in any Uſe at preſent. Theſe may be propagated in the ſame Manner as the former.

LIGUSTRUM; the Privet.

The *Characters* are;

The Leaves grow by Pairs oppoſite to each other; the Flower conſiſts of one Leaf, is tubulous, and divided at the Top into five Segments; the Ovary in the Centre of the Flower-cup becomes a globular, ſoft Fruit, full of Juice, in which are lodg'd four Seeds.

The *Species* are;

1. Ligustrum; *vulgare. Park. Theat.* The common Privet.

2. Ligustrum; *foliis majoribus & magis acuminatis, toto anno folio retinens. Pluk. Alm.* The Ever-green Privet.

3. Ligustrum; *foliis è luteo variegatis. H. R. Par.* The yellow blotch'd Privet.

4. Ligustrum; *foliis argentatis. Breyn. Prod.* The Silver-ſtrip'd Privet.

The firſt of theſe Plants is very common in moſt Parts of *England*, and is ſeldom cultivated in Gardens, unleſs for Variety: It commonly grows about eight or ten Feet high, in Form of a Shrub, but may, by Art, be train'd up to a much greater Height, and may be intermix'd among other Trees of low Growth in Wilderneſſes.

The ſecond Sort will grow much larger than the firſt, and is equally hardy: The Leaves of this commonly remain upon the Tree until the Spring before they decay, unleſs in very hard Winters; for which Reaſon, it is more eſteem'd than the common Sort.

Theſe Plants are eaſily propagated by laying down their tender Shoots in Autumn, which in one Year's Time will be rooted enough to tranſplant; when they may be remov'd to the Places where they are deſign'd to remain, or planted in a Nurſery for two or three Years; where they may be train'd for the Purpoſes deſign'd.

Formerly theſe Plants were greatly in Uſe for Hedges, but ſince ſo many others of greater Beauty have been introduc'd, which are much preferable to theſe for ſuch Purpoſes, they have been entirely rejected, the Trouble in keeping them in Order being very great, nor are the Hedges made with them ever ſo thick and handſome, as thoſe made with divers other Plants.

The two variegated Kinds are pretty Varieties amongſt other ſtrip'd Shrubs: Theſe may be propagated by budding, or inarching them upon the plain Sort, as alſo by laying down their Branches; but as they ſeldom ſhoot ſo faſt, as to produce many Branches proper for Layers, ſo the other Method is chiefly us'd. The Silver-ſtrip'd Sort is ſomewhat tenderer than the Plain, but will endure the open Air, if planted in a dry Soil, and in a warm Situation; but if either of the variegated Kinds be planted in a moiſt, rich Soil, they are ſubject to become plain from their vigorous Growth.

LILAC; The Pipe-Tree.

The *Characters* are;

The Flowers conſiſt of one Leaf, are Funnel-ſhap'd, but divided at Top into five Segments, and are collected into oblong ſpecious Spikes; the Flowers are ſucceeded by compreſs'd Pods, which are ſcarce an Inch long, and are divided into two Cells, in which are contain'd broad, flat Seeds, which are compreſs'd on their Edges.

The *Species* are;

1. LILAC; *Matthioli*. The common Blue *Lilac*, or Pipe-Tree.
2. LILAC; *flore albo. Tourn.* The White *Lilac*, or Pipe-Tree.
3. LILAC; *flore ſaturatè purpureo. Tourn.* The Deep purple *Lilac*, or Pipe-Tree.
4. LILAC; *flore albo, foliis ex luteo variegatis. Cat. Plant. Hort.* The Yellow-blotch'd *Lilac*.
5. LILAC; *flore albo, foliis ex albo variegatis. Cat. Plant. Hort.* The White-blotch'd *Lilac*.
6. LILAC; *folio liguſtri. Tourn.* *Lilac* with Privet Leaves, *falſely call'd*, The Perſian Jaſmine.
7. LILAC; *laciniato folio. Tourn.* *Lilac*, with cut Leaves, *falſely call'd*, The Cut-leav'd Perſian Jaſmine.

The three firſt Sorts do commonly grow eighteen or twenty Feet high, and are very great Ornaments to Quarters of flowering Trees in the Spring during their flowering Seaſon, if rightly diſpos'd amongſt Trees of the ſame Growth. The firſt and ſecond Sorts are more common than the third; but the third is much preferable to the ſecond: The Flowers of that growing much cloſer upon the Bunches, and are of a finer Purple Colour, and the Trees generally produce them in greater Quantities; ſo that this, and the white Sort, being regularly intermix'd mix'd, do afford an agreeable Variety, tho' the ſecond may be admitted to add a Luſtre to the other.

Theſe Plants are eaſily propagated by Suckers, which they ſend forth in great Plenty from the old Plants: Theſe ſhould be taken off in *October*, and planted into a Nurſery, where they may remain three or four Years; after which Time they will be fit to tranſplant into the Wilderneſs, where they are to continue: They will require no other Culture than to dig the Ground about them every Year, and take off the Suckers which are produc'd from their Roots; which, if ſuffer'd to remain, would ſtarve the old Plants, and grow up into an irregular Thicket.

They will grow in almoſt any Soil or Situation, but do commonly flower beſt in that which is dry; for though a ſtrong, moiſt Soil will cauſe them to grow more vigorouſly, yet they are ſeldom ſo productive of Flowers as in a dry Soil, which is generally the Caſe with moſt other Plants.

The two variegated Sorts are preſerv'd by ſome Perſons, who delight in ſtrip'd Plants, as Curioſities, but they have no great Beauty in them; for in the Summer-time, when theſe Plants are free of Growth, their white and yellow Blotches do not appear very plain: and when they do, it appears more like a Diſtemper in them, than any real Beauty. Theſe may be propagated by budding or inarching them upon the common Sort.

The Privet-leav'd *Lilacs* are of humbler Growth than thoſe before-mention'd, ſeldom riſing above ſix or ſeven Feet high, but are very great Ornaments in ſmall Wilderneſs-Quarters of flowering Shrubs, where being intermix'd with other Shrubs of the ſame Growth, they afford an agreeable Proſpect. Theſe produce their Flowers in much longer and ſlenderer Bunches than the other Sorts, and have a more agreeable Scent.

They may be propagated from Suckers as the former; but as they ſeldom produce them in ſuch Plenty, ſo the moſt expeditious Method is, to propagate them by Layers, which will take Root in one Year fit to tranſplant; and the Plants thus rais'd, will be much better rooted than thoſe produc'd by Suckers, and are not ſo ſubject to ſend forth Suckers from their Roots.

The Cut-leav'd Sort differs from the other in no other reſpect but in having its older Leaves deeply cut in: They are both very hardy, and will grow in almoſt any Soil or Situation, and may be train'd up to regular Heads, if rightly manag'd while young.

LILIO ASPHODELUS; The Aſphodel *or* Day Lily.

The *Characters* are;

It hath a Root like Aſphodel (*or* Kingſpear;) *the Flower conſiſts of one Leaf, which is deeply cut into ſix Segments, and expands in Form of a* Lily; *the Flower is ſucceeded by an oval Fruit, which contains ſeveral roundiſh Seeds.*

The *Species* are;

1. LILIO-ASPHODELUS; *luteus*. *Park. Par.* The Yellow Day Lily.
2. LILIO-ASPHODELUS; *puniceus*. *Park. Par.* The Red Day Lily.

Theſe Plants are very common in moſt of the old *Engliſh* Gardens, the firſt is often call'd by the Gardeners, the *Yellow Tuberoſe*, from its having a very agreeable Scent, but the other is called the *Day Lily*,

Lily, or the *Tuberoſe Orange Lily*, in moſt Places.

They are both very hardy Plants, and will multiply exceedingly, if ſuffered to remain two or three Years undiſturbed, eſpecially the red Sort, which ſends forth great Quantities of Off-ſets from the old Plants, by which they may be eaſily propagated: The beſt Time to tranſplant their Roots is in *September* or *October*, after their Leaves are decay'd (tho' they may be removed at almoſt any Time, provided they are taken up with Care, and not kept too long above Ground) they are proper for large Borders in a Pleaſure Garden, or to plant under Trees in Avenues, where they will thrive and flower very well; but they are too large for ſmall Flower Gardens, and afford Harbour for Snails and other Vermin, for which Reaſon they ſhould not be admitted too near choicer Plants.

They will grow in almoſt any Soil or Situation; the yellow Sort produces its Flowers in *May* and *June*, and the red Sort comes about a Month later; their Flowers are of a ſhort Duration, ſeldom continuing above two Days, but are ſucceeded by freſh Flowers for near a Month ſucceſſively; but the Flowers of the yellow Sort are ſmaller, and of longer Duration.

LILIO-NARCISSUS; Lily-Daffodil.

The *Characters* are;

It hath a coated, bulbous Root; the Flower is ſhap'd like a Lily, conſiſting of ſix Leaves, and is cover'd with a membranaceous Sheath like the Narciſſus; *the Fruit ſucceeds the Flower in the ſame Form of the* Narciſſus; *is oblong or roundiſh, and divided into three Cells; which are fill'd with roundiſh Seeds.*

The *Species* are;

1. LILIO-NARCISSUS; *Indicus, ſaturato colore purpuraſcens. Mor. Hiſt.* The Lily-Daffodil, of a deep Purple-colour.

2. LILIO-NARCISSUS; *Indicus, flore albo, exterius rubente. Tourn. Indian* Lily Daffodil, with a white Flower, which is reddiſh on the Outſide.

3. LILIO-NARCISSUS; *polyanthus, flore incarnato, fundo ex luteo albeſcente. Sloan. Cat.* Many-flower'd Lily-Daffodil, with a Carnation Flower, having a whitiſh yellow Bottom, *commonly call'd* in the *Weſt Indies, Red Lily.*

4. LILIO-NARCISSUS; *Japonicus, rutilo flore. Mor. Hiſt.* The *Japan* Lily-Daffodil, *commonly called* the Guernſey Lily.

5. LILIO-NARCISSUS; *folio latiſſimo, floribus niveis inodoris. Tourn.* Lily-Daffodil, with a very broad Leaf, and ſnowy Flowers without Scent.

6. LILIO-NARCISSUS; *Indicus, Narciſſus Liliiflorus, aureus, ſtriis, argenteis pictus, floribus amplis, cernuis gemellis, caule magno cæpa fiſtuloſo. Pluk. Phy. Indian* Lily-Daffodil, with ample Gold-colour'd Flowers ſpotted with Silver, and a large hollow Stalk.

7. LILIO-NARCISSUS; *Indicus, flore incarnato, lineis albis ſtriato, odorato. Indian* Lily-Daffodil, with a Carnation Flower ſtrip'd with white Lines, and of a ſweet Scent, *commonly called* the Bella-donna Lily.

8. LILIO-NARCISSUS; *luteus, autumnalis, minor. Tourn.* The leſſer yellow Autumnal Lily-Daffodil, *commonly call'd* the Autumnal Narciſſus.

The firſt of theſe Plants is very rare at preſent in *England*; but in

Italy it is very common, eſpecially about *Florence*, where they bring large Bunches of the Flowers into the Market and ſell them for Flower-Pots, by the Name of *Narciſſus Bella-donna*; and is probably one of the firſt Sorts of this Flower which was brought into *Europe*. This Plant thrives ſo well in *Italy*, as to need no other Culture than the common *Lily*, and although it does not flower until *Auguſt*, yet it commonly produces good Seeds in that Country, from which they propagate them in great Plenty; but with us they require to be planted in Pots fill'd with light freſh Earth, and in Winter they muſt be ſhelter'd to prevent their Leaves being deſtroy'd by the Froſt, which if it does not quite kill their Roots, will ſo weaken them, as that they will not recover Strength to flower in ſeveral Years after, though you ſhould attend them with ever ſo much Care. This Plant produces its Flowers in *September*, and the Green Leaves come up ſoon after, and abide all the *Winter* and *Spring* until *May*, at which Time they decay, ſoon after which the Roots ſhould be tranſplanted, for if they are let ſtand till *July*, they will have ſent forth new Fibres, when it will greatly injure the Roots if they are diſturb'd.

The ſecond Sort is leſs common in *England* than the firſt; this ſeldom produces more than one Flower upon each Stalk, which is ſmaller than thoſe of the former; but nearly of the ſame Figure; this is alſo cultivated as the former, and flowers about the ſame Seaſon.

The third Sort is very common in *Barbados*, St. *Chriſtopher*'s, and the other warm Iſlands of the *Weſt Indies*; but at preſent it is very rare in *England*: This Sort is much tenderer than either of the former, and will require to be kept in a Hot-bed of Tanner's Bark, in order to produce Flowers. The Roots of this Plant may be very eaſily brought from the *Weſt Indies*, if they are taken up immediately after their Leaves decay, and ſent over in a Box dry, for if they are planted in Tubs of Earth, they generally rot in their Paſſage, by receiving too great Quantities of Water.

The fourth Sort is ſuppos'd to come originally from *Japan*, but has been many Years cultivated in the Gardens of *Guernſey* and *Jerſey*; in both which Places they ſeem to thrive as well as if it was their native Country; and from thoſe Iſlands their Roots are ſent annually to the Curious in moſt Parts of *Europe*, and are commonly call'd *Guernſey Lilies*; the Roots of this Plant are generally brought over in *July* and *Auguſt*, but the ſooner they are taken out of the Ground after their Leaves decay, they are the better: for although the Roots which are taken up when their Flower-ſtems begin to appear, will flower, yet their Flowers will not be ſo large, nor will their Roots be near ſo good after, as thoſe which were removed before they had ſent out freſh Fibres.

When theſe Roots come over they ſhould be planted in Pots filled with freſh, light, ſandy Earth, mix'd with a little very rotten Dung, and placed in a warm Situation, obſerving now and then to refreſh the Earth with Water; but by no Means let them have too much Wet, which would rot their Roots, eſpecially before they come up: About the Middle of *Auguſt*, ſuch of the Roots as are ſtrong enough to flower, will begin to ſhew the Bud of their Flower-ſtem (which is commonly of a red Colour) therefore you ſhould remove theſe Pots into a Situation where they may have the full Benefit of the Sun, and may be ſhelter'd from ſtrong Winds; but by no Means place them too near a Wall, nor under Glaſſes, which would draw them up weak, and render them leſs beautiful: At this Seaſon they ſhould be gently refreſh'd with Water, if the Weather be warm and dry; but if it ſhould prove very wet, they ſhould be ſcreen'd from it.

When the Flowers begin to open, the Pots ſhould be removed under Shelter, to prevent the Flowers from being injured by too much Wet; but they muſt not be kept too cloſe, nor placed in a Situation too warm, which would occaſion their Colour to be leſs lively, and haſten their Decay. The Flowers of this Plant will continue in Beauty (if rightly manag'd) a full Month, and though they have no Scent, yet for the Richneſs of their Colour, they are juſtly eſteem'd in the firſt Rank of the Flowery Race.

After the Flowers are decay'd, the Green Leaves will begin to ſhoot forth in Length, and if ſhelter'd from ſevere Cold, will continue growing all the Winter; but they muſt have as much free Air as poſſible in mild Weather, and be cover'd only in great Rains or Froſts, for which Purpoſe a common Hot-bed Frame is the propereſt Shelter for them, under which if they are placed, the Glaſſes may be taken off conſtantly every Day in dry open Weather, which will encourage the Leaves to grow ſtrong and broad; whereas when they are placed in a Greenhouſe, or not expoſed to the open Air, they will grow long and ſlender, and have a pale, weak Aſpect, whereby the Roots will become weak, ſo that it ſeldom happens that they produce Flowers under ſuch Management.

Theſe Roots ſhould be tranſplanted every other Year toward the latter End of *June*, or the Beginning of *July*, and planted into freſh Earth (but they ſhould not be oftener removed, for that would retard their Flowering.) The Off-ſets ſhould alſo be taken off and planted into ſeparate Pots, which in three Years Time will produce Flowers, ſo that after Perſon are once ſtock'd with theſe Roots, they may increaſe them, ſo as to have a Supply of blowing Roots, without being at the Trouble or Expence of ſending to *Guernſey* every Year for freſh Roots; and the Roots preſerved here, will flower ſtronger than thoſe which are uſually brought from thence; for the Inhabitants of thoſe Iſlands are not very curious in cultivating theſe Roots: Their uſual Method is to plant them at a great Diſtance in a Bed of common Earth, where they let them remain for many Years, in which Time they produce ſuch a Number of Off-ſets, that many times one ſingle Cluſter has contain'd above a Hundred Roots; by which Means thoſe which grow on the Inſide, are ſo much compreſſed by the outer Roots, that they are perfectly flatted, and from the Number of Roots they are all rendered weak, and ſo unfit to produce ſuch large Stems of Flowers, as thoſe which have grown ſingle and are of a ſpherical Figure.

But when a Perſon has got a large Number of theſe Roots, it will be troubleſome to preſerve them in Pots, therefore you ſhould prepare a Bed of the following Earth, in ſome well-ſhelter'd Part of the Garden, *viz.* Take a third Part of freſh Virgin Earth upon a Paſture Ground, which is light, then put near an equal Part of Sea Sand, to which you ſhould add rotten Dung and ſifted Lime-rubbiſh of each an equal Quantity: With this Earth (when well mix'd and incorporated) you ſhould make your Bed about a Foot thick, raiſing it about four or five Inches above the Surface of the Ground, if the Situation be dry; but if the Ground be wet, you ſhould raiſe it eight or nine Inches higher. In this Bed about the Beginning of *July* (as was before directed) you ſhould plant the Roots about ſix Inches aſunder each Way, and in the *Winter*, when the Froſt begins, you ſhould either cover the Bed with a Frame, or arch it over and cover it with Mats and Straw, to prevent their Leaves from being pinch'd with Cold; but in the *Summer* the Covering may be intirely removed, and the Bed kept conſtantly clear from Weeds, obſerving to ſtir the Surface of the Earth now and then, and every Year when the Leaves are decay'd, you ſhould ſift a little freſh Earth over the Beds, to encourage the Roots. In this Bed the Roots may remain until they are ſtrong enough to produce Flowers, when they may be taken up and planted into Pots as was before directed, or ſuffered to remain in the ſame Bed to flower.

The Roots of theſe Plants do not flower again the ſucceeding Year (as in many other Sorts of Bulbs) but if their Bulbs contain two Buds in their Center, as is often the Caſe, they very frequently flower twice within the Compaſs of three Years, after which the ſame individual Root does not flower again; but only the Off-ſets from it.

The fifth Sort is at preſent very rare in *England*, and only to be found in ſome very curious Gardens; this is much tenderer than the laſt, and requires to be managed as was directed for the third Sort, with which Management it will thrive exceeding well, but you muſt obſerve never to give theſe Roots much Water, after their Leaves are decay'd (which is ſoon after *Chriſtmas*) until they ſhoot out again in *April*, for Moiſture at that Seaſon, while they are in an unactive State, is very ſubject to rot them: This Plant produces its Flowers commonly in *March*, and the green Leaves appear ſoon after.

The ſixth Sort is alſo tender, and requires to be kept in a warm Stove in Winter; but in the Summer-ſeaſon it will bear to be expos'd to the open Air, in warm, dry Weather; this Sort ſhould be treated in the ſame Manner as the laſt, with this Difference only, *viz.* that it may be preſerved without being plung'd in Tanners Bark: This Plant produces its Flowers nearly about the ſame Time with the laſt; but the Flowers of this are much more beautiful.

The ſeventh Sort was brought from *Portugal*, where they are in great Plenty, and is by the Inhabitants call'd *Bella-donna*; but this is a very different Plant from that which the *Italians* call by that Name, the Flowers of this Kind being larger and paler colour'd than thoſe of the *Italian* Sort, and ſeldom have more than three or four upon one Stem, whereas the other has often ten or twelve. This Plant is propagated in the ſame Manner as was directed for the *Guernſey* Lily (to which I refer the Reader, to avoid Repetition) the Flowers of this Plant are always produced about the ſame Time as the *Guernſey* Lily, but are not near ſo beautiful.

Theſe Plants do not increaſe very faſt in our Climate, for which Reaſon a curious Perſon ſhould be furniſhed with ſeveral Roots of each Kind from Abroad, in order to have ſome Flowers every Year, for they ſeldom blow two Years together (as was before obſerved) nor does the ſame Root flower more than twice, which is commonly within three Years; ſo that where there are not ſix or eight Roots of each Sort, it can't be expected to have Flowers very often, notwithſtanding no Art or Care be wanting in their Culture; for in their native Countries they are not conſtant Flowerers.

The eighth Sort is a very hardy Plant, and increaſes very faſt from Off-ſets: The Seaſon for tranſplanting theſe Roots, is any Time from *May* to *July*, after which it will be too late to remove them, for they will begin to puſh out new Fibres by the Middle of that Month, if the Seaſon be moiſt, and many times they flower in *Auguſt*; ſo that if they are then tranſplanted it will ſpoil their flowering: This Plant will grow in almoſt any Soil or Situation, but it will thrive beſt in a freſh, light, dry Soil, and in an open Situation, *i. e.* not under the Dripping of Trees, nor too near to Walls. It is commonly called by the Gardeners the *Yellow Autumnal Narciſſus*, and is uſually ſold by them with *Colchicums*, &c. for Autumnal Ornaments to Gardens, for which Purpoſe this is a very pretty Plant.

LILIUM; The Lily.

The *Characters* are;

It hath a bulbous Root, conſiſting of ſeveral fleſhy Scales adhering to an Axis; the Stalk is greatly furniſhed with Leaves; the Flower is compos'd of ſix Leaves, and is ſhap'd ſomewhat like a Bell; in ſome Species the Petals are greatly reflex'd, but in others but little; from the Center of the Flower riſes the Pointal, which becomes an oblong Fruit, that is commonly triangular, divided into three Cells, and full of compreſs'd Seeds, which are border'd, lying upon each other in a double Row.

The *Species* are;

1. LILIUM; *album, flore erecto & vulgare. C. B. P.* Common white Lily.
2. LILIUM; *album, inodorum, flore pleno. H. R. Par.* The double white Lily, without Smell.
3. LILIUM; *album, floribus dependentibus ſive peregrinum. C. B. P.* The foreign white Lily, with hanging Flowers.
4. LILIUM; *album, lato caule multiflorum. H. R. Par.* The white Lily, with broad flat Stalks, bearing many Flowers.
5. LILIUM; *album, vulgare, foliis ad limbos flaveſcentibus. H. L.* Common white Lily, with ſtrip'd Leaves.
6. LILIUM; *album, flore lineis purpureis variegato. D. Marchant.* The white Lily, ſtrip'd with Purple.
7. LILIUM; *purpureo-croceum, majus. C. B. P.* The common Orange Lily; *vulgò.*
8. LILIUM; *pumilum cruentum. Park. Par.* The dwarf red Lily.

9. Lilium; *rubrum, multiplici flore. Park. Par.* The double red Lily.

10. Lilium; *bulbiferum, anguſtifolium. C. B. P.* Narrow-leav'd bulbiferous Lily, *commonly called* the Fiery Lily.

11. Lilium; *floribus reflexis, montanum. C. B. P.* The Imperial Martagon.

12. Lilium; *floribus reflexis, albis, punctatis. C. B. P.* The white ſpotted Martagon.

13. Lilium; *floribus reflexis, albis non punctatis. C. B. P.* The white Martagon, without Spots.

14. Lilium; *floribus reflexis, montanum, flore pleno. H. R. Par.* The double flowering Martagon.

15. Lilium; *flavum, anguſtifolium, flore flavo, maculis nigris diſtincto. C. B. P.* The ſpotted *Canada* Martagon; *vulgò.*

16. Lilium; *miniatum, odorum, anguſtifolium. C. B. P.* The ſcarlet Martagon of Pompony; *vulgò.*

17. Lilium; *Byzantinum, miniatum, polyanthos. C. B. P.* The ſcarlet Martagon, with many Flowers.

18. Lilium; *Byzantinum, miniatum. C. B. P.* The common ſcarlet Martagon.

19. Lilium; *Byzantinum, flore flavo. C. B. P.* The yellow Martagon of *Conſtantinople.*

20. Lilium; *purpureo-croceum majus, foliis ex luteo eleganter variegatis.* The Orange Lily, with beautiful variegated Leaves.

There are ſeveral other Varieties of theſe Plants which are preſerved in the curious Gardens Abroad, many of which were formerly in *England* (as may be gather'd from *Parkinſon* and ſeveral other Writers upon curious Flowers) but theſe which are here mentioned are all the Sorts I can at preſent find in the Gardens near *London*; though it is very probable many of the other Sorts may be found in ſome old Gardens of this Kingdom, which were formerly poſſeſs'd by curious Delighters in Flowers; for as moſt of theſe Sorts are very hardy, and will grow with little Culture, ſo when they are once fix'd in a Garden, they are not very ſubject to decay, unleſs their Roots are deſtroy'd, but will abide many Years without any Care; therefore from ſuch Places there may be Hopes of retrieving thoſe Flowers again.

The common white *Lily* is ſo well known, that it will be needleſs to ſay any Thing of it in this Place: The ſecond Sort with double Flowers, is by ſome Perſons preſerved by way of Curioſity; but there is no Beauty in it, for the Flowers ſeldom open, and have no Scent, ſo that it ſcarcely deſerves a Place in a good Garden: The third Sort with pendulous Flowers, is ſometimes called the *White Conſtantinople Lily*, from whence it was formerly brought, but is now become almoſt as plenty as the common white *Lily* in many Gardens; this differs from the common Sort, in having ſlenderer Stems which are of a purpliſh Colour, and the Petals of the Flowers are narrower, and the Flowers are ſomewhat leſs, and always hang down.

Theſe Plants are all very hardy, and require no other Culture, than to be taken up every other Year (in *July* after the Flowers are decay'd) and pull off the Suckers from them, which if ſuffer'd to remain on, would ſtarve the old Roots, and cauſe them to flower very weak; but they ſhould not be kept long out of the Ground, nor removed after their Leaves appear above Ground, both which will weaken the Roots ſo much, that they will not flower the following Summer. They increaſe greatly from Off-ſets, whereby they are become ſo common as to be little eſteem'd.

The fourth Sort ſeems to be a Variety from the firſt: The Stalks of this are very broad, and have generally double the Number of Flowers upon each Stalk as the common, which are equally as large and fair: but whether it will conſtantly preſerve this Difference, I can't poſitively affirm, tho' for three Years paſt I have obſerv'd them to remain the ſame in two or three different Gardens. This is equally hardy as the common Sort, and is increas'd the ſame way.

The *Strip'd-leav'd Lily* is a great Ornament to Flower-Borders during the Winter-ſeaſon; their beautiful variegated Leaves always appearing in *September*, and are continu'd all the Winter, making a fine Appearance in the Depth of Winter, when few other Plants are in Beauty: For which Reaſon this Plant hath been greatly propagated of late Years. This is increas'd as the common Sort, but the Roots ſhould always be planted in a freſh, light Soil, in which they will thrive exceedingly: But if you make the Ground rich with Dung, it will certainly deſtroy them, as will alſo a very wet or ſtrong Soil. The Seaſon for tranſplanting theſe Roots, is the ſame with the common Sort.

The *White Lily ſtrip'd with Purple*, has not been many Years brought into *England*. Of this Kind there are two Sorts; one of which is much more beautifully variegated than the other; both of which were obtain'd originally from Seed. Theſe are both propagated in the ſame Manner as the common Sort, but ſhould be planted in a dry, ſandy Soil, mix'd with a little Lime-Rubbiſh, and expos'd to the Morning Sun: In which Soil and Situation they will flower exceeding well, and their Stripes will be much deeper colour'd than when they are planted in a richer Soil, and their Roots will make a better Increaſe.

The *Orange Lily* is ſo well known, that it is needleſs to ſay any Thing of it here. That Sort which is commonly call'd the *Double Orange Lily*, differs from the common only in having two or three more Petals in each Flower, which is not conſtant, but very apt to degenerate to the common Sort, ſo that it is ſcarcely worth preſerving, unleſs for Variety Sake. Theſe are propagated by Off-ſets from the old Roots, which are commonly ſent forth in great Plenty, and therefore the Roots ſhould never remain more than two Years unremov'd, becauſe the Number of Off-ſets would greatly weaken them, and render their Flowers ſmall, and fewer in Number. Theſe may be tranſplanted any Time from the Beginning of *Auguſt* to the End of *October*, for they do not ſhoot again ſoon after their Stems are decay'd, as do the *White Lilies*; but, on the contrary, remain till *February* before they appear above-ground. They will grow in almoſt any Soil or Situation, but beſt in a dry, light Soil, and an open Expoſure.

The *bulbous fiery Lily*, produces its Flowers three Weeks before the common Sort, and is much more beautiful. This Sort was formerly more common than at preſent, as were ſeveral other Sorts of *Lilies*: It is equally as hardy as the common Sort, and doth increaſe much faſter; for upon the Flower-ſtems, between the Wings of the Leaves and the Stalk, are produc'd ſmall Bulbs; which when taken off, and planted, do become ſtrong Roots in two Years, ſo that it may be render'd very plentiful in a ſhort Time, were People to plant all their Increaſe. This requires the ſame Soil and Culture as the *Orange Lily*; as doth alſo the *Dwarf Red Lily*, which is nearly allied to this. They will grow under Trees, which renders them proper to plant in Avenues; where, when intermix'd amongſt other hardy Flowers of the ſame Growth, they will make a beautiful Appearance, and are very uſeful to furniſh Baſons and Flower-Pots for Halls, Chimnies, *&c.* during the Seaſon of Flowering.

The *Imperial Martagon* is very common in moſt old Gardens in *England*. This is equally as hardy as the common *Lily*, and requires no other Culture: The Flowers are produc'd at the latter End of *May*, and do make a very handſome Figure in the Middle of large Borders in a Flower-Garden, but the Scent is too ſtrong to be born by many People, for which Reaſon they ſhould never be plac'd in Baſons of Flowers in a Room, nor be planted too near the Houſe.

The *White*, and the *White-ſpotted Martagons*, do flower about the Middle of *June*, or ſometimes later: Theſe produce a greater Number of Flowers upon a Stalk than the former, but the Flowers are ſeldom ſo large, and commonly grow more ſparſedly on the Stalks. Theſe have a ſtrong Scent, but not quite ſo diſagreeable as the former. The Roots of theſe Plants ſhould be tranſplanted ſoon after their Stems decay; for if they are taken up late in the *Autumn*, they ſeldom produce their Flowers ſtrong the ſucceeding *Summer*. Theſe require a freſh, light Soil, and an open Situation; if they are ſuffer'd to remain three Years undiſturb'd, they will make a good Increaſe, and produce ſtrong Flowers.

The *Double Martagon* requires the ſame Soil and Culture with the two laſt: This produces a large Quantity of fair double Flowers upon each Stem, which renders it very valuable: The Flowers do commonly appear the Beginning of *July*, or ſomewhat later.

The *Spotted Canada Martagon*, is much tenderer than any of the former. The Roots of this Sort ſhould be planted in a warm Border, where they may be protected from ſevere hard Froſts, by covering the Surface of the Ground with Peas-haulm, *&c.* It muſt alſo have a freſh, light, dry Soil, and ſhould be planted at leaſt ſix Inches deep; for when the Roots lie near the Surface, they are often injur'd by Froſts in Winter.

This Plant was originally brought from *Canada* by the *French*, from whom we were firſt ſupply'd with it, but ſince we have receiv'd many Roots of it from *Virginia*, where it alſo grows in great Plenty in the Woods. The Flowers of this Kind are almoſt as large as thoſe of the *Orange Lily*, but are more reflex'd, and of a fine yellow Colour, ſpotted with Black: This flowers in *July*.

The *Red Martagon of Pompony*, is one of the moſt beautiful Sorts of all the *Martagons* which I have yet ſeen, and produces the greateſt

Number of Flowers upon a Stem of any of the Kinds (eſpecially when the Roots are ſtrong, and have remain'd undiſturb'd two or three Years) when they will many times have upward of fourſcore Flowers upon a Stem: The Flowers are not ſo large, nor ſo deep-colour'd as the *Scarlet Martagon*, but rather of a yellowiſh-red Colour, and ſpotted with Black: This flowers commonly the latter End of *May*, or the Beginning of *June*.

The Roots of this Plant are tender, and will not endure to be often tranſplanted, for that will deſtroy them: The beſt Seaſon to remove them, is ſoon after their Stems decay; when they ſhould never be kept long out of the Ground, but planted again aſſoon as poſſible. Theſe require a freſh, light, ſandy Soil, but will by no Means thrive in a rich, moiſt Soil, which will cauſe 'em to rot; and they muſt have an open Expoſure, for if they are over-hung by Trees, they will not thrive. This ſhould alſo be planted as deep in the Ground as the *Canada Martagon*, for the ſame Reaſon as was before obſerv'd on that.

The *Scarlet Martagon*, with many Flowers, is in ſome curious Gardens very common, it being a very hardy Plant in reſpect to Cold, which it endures very well, and is eaſily propagated from Off-ſets, as the other Sorts, but muſt have a warm, light, dry Soil, which ſhould not be dung'd, nor overſhadow'd with Trees, either of which will cauſe the Roots to decay. This is a very beautiful Flower, and very proper to adorn the Borders of large Flower-Gardens. It produces its Flowers in *July*, after moſt of the other Sorts, which are of a deep-ſcarlet Colour, growing many upon a Stalk.

The other *Scarlet Martagon* is alſo common in ſome Gardens, but is not ſo much valued as the laſt; the Flowers are not ſo deep colour'd, and it ſeldom has more than ſix or eight upon a Stem. This flowers much about the ſame Time as the former, and requires the ſame Soil and Culture.

The *Yellow Martagon of Conſtantinople* is very rare in *England* at preſent, and only to be found in the Gardens of ſome curious Collectors of theſe Beauties: This requires much the ſame Culture as the two laſt-mention'd, but muſt not be often remov'd, which will not only weaken the Root, but alſo prevent its flowering. When the Roots of this Kind have been ſtanding three Years upon a good freſh dry Soil, I have obſerv'd above forty Flowers upon a Stem, which have made a very beautiful Appearance. This flowers about the ſame Seaſon as the former.

The *ſtrip'd Orange Lily* is a very beautiful Plant, and was a few Years ſince ſold at a very great Price, but of late it hath been more common, as being eaſily propagated by Off-ſets; ſo that when it is once obtain'd, it may be ſoon increas'd to what Number you pleaſe, provided you plant it in a dry Soil, and a warm Situation. This beautiful Plant was, ſome Years ſince, accidentally produc'd from Seeds of the common *Orange Lily*, which were ſhed upon a Border, where they were ſuffer'd to grow, until this Plants appear'd with its fine variegated Leaves; which the Owner, upon Diſcovery, mark'd, and, at a proper Seaſon, remov'd into a better Situation, where it throve and increas'd ſo well, as in a few Years to be ſpread into divers Parts of the Kingdom. This Plant muſt never be planted in a rich Soil, which will greatly diminiſh its Beauty, and many times cauſe the Roots to decay.

All the Sorts of *Lilies* and *Martagons* may be propagated by ſowing their Seeds; by which Method ſome new Varieties may be obtain'd, provided the Seeds are ſav'd from the beſt Sorts, eſpecially the *Martagons*, which are more inclinable to vary than the other *Lilies*. The Manner of Sowing them is as follows:

You muſt be provided with ſome ſquare Boxes about ſix Inches deep, which ſhould have Holes bored in their Bottoms, to let the Wet paſs off; theſe Boxes ſhould be fill'd with freſh light ſandy Earth, and in the Beginning of *Auguſt*, ſoon after the Seeds are ripe, you muſt ſow them thereon pretty thick, covering 'em over with light ſifted Earth about half an Inch; then place the Boxes where they may have the Morning Sun only, obſerving, if the Seaſon ſhould prove dry, to refreſh 'em often with Water, as alſo to pull out all Weeds which may be produc'd: In this Situation the Boxes ſhould remain until *October*, when you muſt remove 'em where they may have as much Sun as poſſible, as alſo be ſcreen'd from the cold North and Eaſt Winds during the Winter Seaſon: But in the Spring of the Year, about the Beginning of *April*, you muſt remove the Boxes into their former Poſition; for now the young Plants will appear above-ground, which are impatient of too much Heat: beſides, the Earth in the Boxes will dry too faſt at this Seaſon, if expos'd to the full Sun at Noon. You muſt alſo obſerve at this Seaſon to keep them intirely clear from Weeds, as alſo to refreſh them gently with Water if the Seaſon ſhould prove dry; in this Place you ſhould let the Boxes remain until the Beginning of *Auguſt*, at which Time you ſhould prepare ſome Beds of the above-mention'd freſh light Earth, which muſt be levell'd very even: Then take the Earth out of the Boxes, together with the ſmall Bulbs, and ſtrew it equally over the Beds, covering it over about half an Inch thick with fine-ſifted Earth: And if the Seaſon ſhould prove very hot and dry, you would do well to ſhade the Beds in the Middle of the Day from the great Heat of the Sun, and refreſh them now-and-then with Water.

You muſt alſo obſerve to keep them intirely clear from Weeds: And if the following Winter ſhould prove very cold, you muſt cover the Beds with Peas-haulm, or ſome other light Covering, to keep out the Froſt, which would prejudice the Roots, if ſuffer'd to enter deep into the Ground (eſpecially while they are ſo young:) but you muſt never let the Covering remain on in mild Weather, which would alſo be very injurious to them.

In *February*, when the hard Froſts are over, you ſhould gently clear off the Earth upon the Surface of the Beds (which, during the Winter-ſeaſon, will often have contracted a Moſſineſs) and ſift a little freſh Earth equally over the Beds, which will greatly encourage the Roots: But in doing this, you muſt be very careful not to ſtir the Ground ſo deep as to injure the Roots: Nor ſhould you defer doing it too late, leſt the Shoots ſhould be coming up, which, by this Operation, might be broken, and greatly hurt. And as the Seaſon advances, ſo you muſt be careful to clear them from Weeds, and in dry Weather to water them; and in very hot Days, if you ſhade 'em from the Sun, it will be of great Service to them: but this need not be done 'till the Latter-end of *April*, or the Beginning of *May*, when the Seaſon is ſometimes very hot and dry.

When their Leaves are quite decay'd, you ſhould ſtir the Surface of the Beds again (but do not go too deep) which will prevent the Weeds from growing very faſt, and be of Service to the Roots; and in *September* you muſt ſift ſome more freſh Earth over the Beds about half an Inch thick: and in Winter and Spring you muſt manage them as was directed for the preceding Year.

In *September* following theſe Roots will require to be tranſplanted to a greater Diſtance, when you muſt prepare ſome Beds of the ſame freſh light Earth, as was before directed, making them level; then take up the Roots, and tranſplant them into the Beds, placing them about eight Inches aſunder, obſerving to put the Roots with their Buds uppermoſt, and about four Inches below the Surface.

This Work ſhould be done when the Weather is moiſt; for if the Roots are tranſplanted in a very dry Seaſon, and there doth not happen Rain ſoon after, they will take a Mouldineſs, which many times rots them.

You muſt alſo obſerve (as was before directed) to keep the Beds intirely clear from Weeds: And in Winter, if the Froſt ſhould be very ſevere, you muſt cover them with Peas-haulm, to prevent the Roots from being injured thereby: And in the Spring you ſhould take off the Earth from the Surface of the Beds, as before, laying ſome freſh thereon, and ſo continue the Summer and Winter's Work, as before.

The ſecond Year after being planted in theſe Beds, the ſtrongeſt Roots will begin to flower; at which Time, if you obſerve any peculiar Varieties, you ſhould put down a Stick by each of thoſe Roots, to mark them; which may be taken up when their Leaves are decay'd, and remov'd into the Borders of the *Flower-Garden*, or tranſplanted into other Beds at a greater Diſtance, to encourage them to flower ſtrong. But you can't be a Judge which of thoſe will be good by their firſt Flowers, therefore you ſhould never reject any of them until they have flower'd two or three Years; for, many times, ſome of theſe Flowers will make but a mean Appearance the firſt Year, and afterwards become fair handſome Flowers, when they have obtain'd Strength; ſo that you ſhould ſuffer all ſuch, as you are not aſſured of their Worth, to remain undiſturb'd two or three Years, that you may be aſcertain'd which of them are worth preſerving; which ſhould be remov'd into the *Flower-Garden* at a proper Seaſon: but the ordinary ones may be rejected, or planted in ſhady outer Walks, where, tho' they are mean Flowers, yet they will appear well enough in ſuch Places.

LILIUM CONVALLIUM; Lily of the Valley, *or* May Lily.

The *Characters* are;

The Flower conſiſts of one Leaf, is ſhap'd like a Bell, and divided at the Top into ſix Segments: The Ovary becomes a ſoft globular Fruit, containing ſeveral round Seeds.

The *Species* are;

1. LILIUM CONVALLIUM; *album.* C. B. P. Common Lily of the Valley, with white Flowers.

2. LILIUM CONVALLIUM; *flore rubente. C. B. P.* Lily of the Valley, with reddiſh Flowers.

3. LILIUM CONVALLIUM; *latifolium, flore pleno, variegato. Tourn.* Broad-leav'd Lily of the Valley, with a double variegated Flower.

There are ſome other Varieties of this Plant, which are preſerv'd in ſome curious Botanick Gardens abroad, but theſe are all the Sorts I have obſerv'd in the *Engliſh* Gardens. The firſt Sort is very common in ſhady Woods in divers Parts of *England*. The ſecond is a Variety of the firſt, differing only in the Colour of the Flower; which Difference it conſtantly maintains when cultivated in Gardens.

They delight in a moiſt ſhady Situation, where they will thrive exceedingly, and produce a large Quantity of Flowers. The beſt Time for tranſplanting theſe Roots is early in the Spring, juſt before they begin to ſhoot.

The Double Sort was brought from *Holland* ſome Years ſince; but whether it was obtain'd from Seeds originally, or found by Accident, I can't ſay. This may be propagated by parting the Roots in the Spring, in the ſame Manner as the former.

LILIUM PERSICUM; *vide* Fritillaria.

LILIUM SUPERBUM; *vide* Methonica.

LIME-TREE; *vide* TILIA.

LIMON; The Lemon-Tree.

The *Characters* are;

It hath large ſtiff Leaves like the Citron, *without any Appendage at the Bottom: The Flower conſiſts of many Leaves, which expand in Form of a* Roſe: *The Fruit is almoſt of an oval Figure, and divided into ſeveral Cells, in which are lodg'd hard Seeds ſurrounded by a thick fleſhy Subſtance, which, for the moſt Part, is full of an acid Juice.*

The *Species* are;

1. LIMON; *vulgaris. Ferr. Heſp.* The Common Lemon.

2. LIMON; *dulcis. Ferr. Heſp.* The Sweet Lemon.

3. LIMON; *acris. Ferr. Heſp.* The leſſer Soure Lemon.

4. LIMON; *dulci medullâ, vulgaris. Ferr. Heſp.* The common Sweet Lemon.

5. LIMON; *Pyri effigie. Ferr. Heſp.* The Pear-ſhap'd Lemon.

6. LIMON; *Imperialis. Ferr. Heſp.* The Imperial Lemon.

7. LIMON; *Adami Pomum commune. Ferr. Heſp.* Lemon, *commonly call'd* Adam's Apple.

8. LIMON; *ſpineolus. Ferr. Heſp.* The Wild Lemon, *vulgò.*

9. LIMON; *ſtriatus, vulgatior. Ferr. Heſp.* The Furrow'd Lemon.

10. LIMON; *citratus, altero fœtus. Tourn.* The Childing Lemon; *vulgò.*

11. LIMON; *qui Lima acris dicitur. Ferr. Heſp.* The Soure Lime.

12. LIMON; *qui Lima dulcis dicitur. Ferr. Heſp.* The Sweet Lime.

13. LIMON; *vulgaris, foliis ex luteo eleganter ſtriatis.* The Gold-ſtrip'd Lemon.

14. LIMON; *vulgaris, foliis ex albo variegatis.* The Silver-ſtrip'd Lemon.

There are ſome other Varieties of theſe Trees in the curious Gardens abroad, from whence we may expect to be ſupply'd with them all, ſince there are every Year large Quantities of theſe Trees brought over from *Italy*, where the Gardeners are as fond of any new

Kinds to ſupply their Cuſtomers with, as our Country-men are of new Sorts of Fruit. But ſince theſe Varieties are annually increas'd from Seeds, like other Fruits, ſo it would be needleſs to attempt an Account of them all, becauſe in a very ſhort Time many new Varieties may be produc'd.

The Fruit of the four firſt Sorts are generally brought over from *Lisbon* every Year in great Plenty, and are ſold promiſcuouſly in *London* in the *Winter* and *Spring*, as are great Numbers of the Trees, which are annually brought over from *Italy*.

The fifth, ſixth, and ſeventh Sorts are preſerv'd, for their Variety, in many curious Gardens; but the fifth is very uncommon in *England* at preſent.

The ſixth is a very large beautiful Sort, and of an agreeable Flavour: This has produc'd very good Fruit in divers Gardens in *England*, which has been as well-taſted as any of thoſe which are brought over from *Italy*.

The ſeventh Sort is ſomewhat tenderer than the other, and requires a warmer Situation in Winter; otherwiſe the Fruit is very ſubject to drop off at that Seaſon.

The eighth Sort is commonly call'd the *Wild Lemon*, (though improperly) becauſe it has many Thorns upon the Branches; but this will produce very fair Fruit in this Kingdom. The Flowers of this Kind are generally of a reddiſh or purpliſh Colour on the Outſide before they open, but afterwards fade, and change to a paler. The Leaves of this are alſo of a very deep Green, and gently ſerrated upon their Edges.

The *Furrow'd Lemon* is in divers Gardens in *England*, where the Fruit very often ripens well, and is chiefly kept for Variety, as differing from the Common Sort, in having deep Furrows in the Fruit; but it is not ſo good for Uſe, nor does the Fruit produce ſo much Juice as the Common Sort.

The *Childing Lemon* is alſo preſerv'd as a Curioſity, the old Fruit commonly producing a young one from its Centre.

The two Sorts of *Limes* are likewiſe in many Gardens in this Kingdom; but theſe require the ſame Degree of Warmth as the *Shaddock Orange*, in order to produce Fruit; for if they are plac'd among *Orange-Trees*, the Fruit will fall away in Winter, and come to nothing.

The two variegated Sorts are preſerv'd for their ſtrip'd Leaves (which are greatly eſteem'd by ſome Perſons who are curious in collecting variegated Plants): But theſe are tenderer than the plain Sorts, and, if not duly attended in Winter, will be very apt to caſt their Leaves, and appear very unſightly.

There is alſo another Sort, which produces Double Flowers; but this ſeems not to be very conſtant; for I have obſerv'd upon the ſame Tree, ſome Flowers Single, and others Double, at the ſame Time.

All theſe Sorts are propagated by budding or inarching them either on Stocks of *Lemons* or *Citrons* produc'd from Seeds; but they will not ſo readily unite on *Orange* Stocks; for which Reaſon the *Citrons* are preferable to either *Oranges* or *Lemons* for Stocks, as they do readily join with either Sort; and being of larger Growth, do cauſe the Buds of the other Sorts to ſhoot much ſtronger than if they were on Stocks of their own Kind. The Method for raiſing theſe Stocks, and the Manner of Budding them, being already exhibited under the Article of *Aurantium*, it would be ſuperfluous to repeat it here.

The Culture of the *Lemon* being the ſame with that of the *Orange-Tree*, it would be alſo needleſs to repeat it here; therefore I ſhall only obſerve that the common *Lemons* are ſomewhat hardier than the *Oranges*, and will bring their Fruit to Maturity with us better than They will do, and require to have a greater Share of freſh Air in Winter; for which Reaſon they ſhould always be placed nearer to the Doors or Windows of the Green-houſe: And as they generally produce ſtronger Shoots, ſo they require more Water to be given them than the *Orange*; but as to the tender Sorts, they muſt be treated with a little more Care, otherwiſe their Fruit will fall off in Winter, and come to nothing. Theſe Things being fully exhibited before, I refer the Reader (as I hinted) to the Article *Aurantium*, where their Culture is fully ſet forth.

LIMONIUM; Sea-Lavender.

The *Characters* are;

It hath a fibroſe Root: The Stalks are naked, and branched: The Cup of the Flower is long and tubuloſe, but expanded at the Top: The Flower in ſome Species conſiſts of one Leaf, but in others of ſeveral, and is ſhap'd like a Clove-Gilli-flower: *The Pointal, which ariſes out of the Flower-cup, becomes an oblong Fruit, wrapt up in the Flower-cup, as in an Husk.*

The *Species* are;

1. LIMONIUM; *Maritimum, majus. C. B. P.* Common Great Sea-Lavender.

2. LIMONIUM; *Maritimum, majus, alterum, ſerotinum, Narbonenſe. H. R. Par.* Another large late flowering Sea-Lavender of Narbonne.

3. LIMONIUM; *Maritimum, minus, Oleæ folio. C. B. P.* Small Sea-Lavender, with an Olive-Leaf.

4. LIMONIUM; *Anglicum, minus, caulibus ramoſioribus, floribus in ſpicis rarius ſitis. Raii. Hiſt.* Leſſer Engliſh Sea-Lavender, with branch'd Stalks, and Flowers ſeldom growing in a Spike.

5. LIMONIUM; *Orientale, plantaginis folio, floribus umbellatis. T. Cor.* Oriental Sea-Lavender, with Plantain Leaves and Flowers growing in an Umbel.

6. LIMONIUM; *peregrinum, foliis aſplenii. C. B. P.* Foreign Sea-Lavender, with Spleen-wort Leaves.

7. LIMONIUM; *Siculum, lignoſum, gallas ferens & non ferens. Bocc. Rar.* Woody Sicilian Sea-Lavender.

There are ſeveral other Species of this Plant, which are found upon the Sea-coaſts of *Italy*, *Spain*, and the Southern Parts of *France*, but theſe here-mention'd are all the Sorts I have obſerv'd in the *Engliſh* Gardens. The firſt and fourth Sorts are found upon the Sea-Coaſts in divers Parts of *England*, eſpecially the firſt, which is the moſt common; the other being only found in ſome particular Places. The ſecond and third Sorts are pretty common in the Southern Parts of *France*. The fifth Sort was found by Monſ. *Tournefort* in the *Levant*. The ſixth, which is the moſt beautiful of all the Sorts, was found by Mr. *Ray* in great Plenty in divers Parts of *Sicily*; and *Cluſius* obſerv'd it at *Malaga*, and about *Cadiz*. The ſeventh Sort, which grows to the Stature of a Shrub, was found in *Sicily* by *Pere Boccone*, and by him figur'd and deſcrib'd in his Book of *Rare Sicilian Plants*.

The five firſt mention'd Sorts are pretty hardy, and will endure the

Cold of our ordinary Winters very well, provided they have a ſandy Soil, and a warm Situation: Theſe may be propagated by parting their Roots towards the latter End of *March*. When they are planted, which ſhould be in a light ſandy Soil, you muſt water and ſhade them until they have taken Root; after which, they will require no other Culture than to keep them clear from Weeds, and give them Water plentifully in dry Weather. In *July* theſe Plants will produce beautiful Spikes or Tufts of blue or Purple-colour'd Flowers, which will continue in Perfection a long Time; and if the Seaſon proves favourable in Autumn they will ripen their Seed.

The ſixth Sort is ſomewhat tenderer than the others, and muſt be preſerv'd in Pots fill'd with freſh light Earth, and plac'd in the Green-houſe in hard Weather, otherwiſe the Cold of our Winters often deſtroys them: This Plant may be propagated as the former, but is not ſo apt to increaſe; for which Reaſon, the beſt Method is, to be furniſh'd with good Seeds from Abroad, (for it never perfects its Seed in *England*), which, if ſown upon a warm Border of light freſh Earth, will come up very well; and in the Summer, when the Plants have acquir'd ſufficient Strength for Tranſplantation, they muſt be taken up and planted in Pots, placing them in the Shade until they have taken Root; after which, they may be expos'd to the open Air until *October*, when they muſt be remov'd into the Green-houſe, obſerving to place them where they may have as much free Air as poſſible in mild Weather: And during the Winter-ſeaſon they muſt be frequently water'd; but you muſt never give them too much at once, which is apt to rot their Roots, eſpecially in that Seaſon. You muſt alſo obſerve to pick off all decay'd Leaves, which, if ſuffer'd to remain on the Plants, very often infect them; and it being pretty nice in its Culture, it will often fail, upon a ſmall Neglect of this Kind. This Plant produces its Flowers in *July* and *Auguſt*, and, many times, continues in Beauty the greateſt Part of *September*.

The ſeventh Sort riſes to be four or five Feet high, and hath ſlender woody Branches; from which, in *July* and *Auguſt*, are produc'd Spikes of ſmall blue Flowers, which make a very handſome Appearance, (eſpecially in a warm Seaſon, when their Flowers open kindly) and continue in Beauty a long Time.

This Plant is propagated by planting ſome of the tender Cuttings in any of the Summer Months, in Pots fill'd with light ſandy Earth, and plac'd in a moderate Hot-bed to facilitate their taking Root, and after they are rooted, they may be expos'd to the open Air until *October*; when they muſt be remov'd into a Green-houſe, placing them in a Situation where they may have as much free Air as poſſible in mild Weather: During the Winter-ſeaſon, they ſhould have frequent, but gentle Refreſhings with Water: You muſt alſo obſerve to keep them clear from decay'd Leaves and Branches, which will infect the whole Plants upon which they are ſuffer'd to remain; and in the Summer-ſeaſon they ſhould be expos'd in ſome well-ſhelter'd Place amongſt other Exotick Plants.

LINARIA; Toad-Flax.

The *Characters* are;

The Leaves are oblong, and produc'd alternately on the Branches;

the Cup of the Flower conſiſts of one Leaf, which is divided into five long acute Segments; the Flower, which conſiſts of one Leaf, is of an anomalous, perſonated Figure, ending in a Tail behind, and in the Fore-part divided into two Lips, of which the Upper is cut into two or more Parts, and the Under into three; the Ovary (which riſes from the Centre of the Flower-cup) becomes a roundiſh Fruit or Husk, divided into two Cells or Apartments, by an intermediate Partition, and full of Seeds, which are ſometimes flat and border'd, ſometimes corner'd and roundiſh, adhering to the Placenta.

The *Species* are;

1. Linaria; *vulgaris, lutea, flore majore. C. B. P.* Common Yellow Toad-Flax, with a large Flower.

2. Linaria; *purpurea, major, odorata. C. B. P.* Great Purple Sweet-ſmelling Toad-Flax.

3. Linaria; *latifolia, Dalmatica, magno flore. C. B. P.* Broad-leav'd Dalmatian Toad-Flax, with a large Flower.

4. Linaria; *latiſſimo folio, Luſitanica. Tourn.* Broad-leav'd Portugal Toad-Flax.

5. Linaria; *Hiſpanica, procumbens, foliis glaucis, flore luteo, ſtriato, labiis nigro-purpureis.* Spaniſh trailing Toad-Flax, with Sea-green Leaves, and yellow ſtrip'd Flowers with purple Lips.

6. Linaria; *Sicula, multicaulis, folio molluginis. Bocc. Rar.* Sicilian Toad-Flax, with many Stalks, and a Leaf of the White Lady's Bedſtraw.

7. Linaria; *triphylla, minor, lutea. C. B. P.* Small, three-leav'd yellow Toad-Flax.

8. Linaria; *triphylla, minor, lutea, floris vexillo, & calcari purpureo. Boerh. Ind.* Small, three-leav'd, yellow Toad-Flax, with the Standard and Heel of a purple Colour.

The firſt of theſe Plants grows in great Plenty upon the Sides of dry Banks in moſt Parts of *England*, and is ſeldom cultivated in Gardens, for it is a very troubleſome Plant to keep within Bounds, the Roots being very apt to ſpread underground, and riſe at a great Diſtance from the Mother Plant, whereby it greatly injures whatever Plants ſtand near it. This is the *Species* mention'd in the Catalogue of Simples at the End of the College Diſpenſatory to be us'd in Medicine.

The ſecond is a perennial Plant, which is often cultivated in Gardens: This produces fine Spikes of purple Flowers in *June* and *July*, and it being a very hardy Plant, growing in almoſt any Soil or Situation, ſhould be admitted into every good Garden, where it may be planted in ſhady Situations, or upon the Middle of large Borders in the Pleaſure-Garden; in which Place it will make an handſome Appearance, and continues a long Time in Flower.

This Plant is propagated by ſowing the Seeds in the Spring, which will come up ſoon after; and the Plants muſt be tranſplanted out into Beds at the Diſtance of ſix or eight Inches; in which Beds they may remain until the *Michaelmas* following, (obſerving to keep them clear from Weeds): At which Time they ſhould be tranſplanted into the Places where they are to remain for good, and will require no other Culture than only to keep them clear from Weeds; and when the Flower-ſtems advance in the Spring, they ſhould be ſupported by Stakes, otherwiſe they are ſubject to be broken by ſtrong Winds: They may alſo be propagated by parting their Roots in Autumn; but as the Seed ripens very well, ſo it is the better Way to raiſe them from that.

The third and fourth Sorts are tenderer than the laſt, and ſhould be planted in a dry Soil and a warm Situation, otherwiſe they are often deſtroy'd in Winter. Theſe are propagated by Seeds in the ſame Manner as the former, as alſo by parting their Roots; but it is adviſeable always to keep ſome of theſe Plants in Pots, that they may be remov'd into Shelter in the Winter, otherwiſe in hard Froſts they will be kill'd.

The fourth is the moſt beautiful Sort of them all; this produces very large Spikes of purple Flowers, which make a fine Appearance; but it ſeldom produces ripe Seeds in this Country, ſo that the Seeds muſt be obtain'd from Abroad, and the Plants propagated from Off-ſets or Cuttings; which, if planted in the Spring, will take Root very well, whereby it may be maintain'd.

The fifth Sort was brought over from *Gibraltar* by Sir *Charles Wager*, *Anno* 1727, and hath ſince been communicated to ſeveral curious Perſons: This Plant is eaſily propagated by parting the Roots, or planting Cuttings in any of the Summer Months, which if water'd and ſhaded will ſoon take Root, and may afterwards be planted in Pots fill'd with freſh, light, undung'd Earth, in which they will ſucceed much better than in a richer Soil; for if they are planted in a fine rich Earth, it cauſes them to grow very faſt for a ſhort Time, but they ſeldom fail to rot ſoon after. Theſe muſt be remov'd into Shelter in Winter, where they muſt have as much free Air as poſſible in mild Weather, and be only protected from ſevere Cold; ſo that if the Pots are plac'd under an Hot-bed Frame, it will be better than to place them in a Green-houſe; and I believe if ſome of the Plants were planted in a dry, rubbiſhy Soil under a warm Wall, they would endure abroad very well in our ordinary Winters.

The ſixth, ſeventh, and eighth Sorts are annual Plants, which ſhould be ſown early in the Spring upon a Bed of light, freſh Earth; and when the Plants are come up about two Inches high, they ſhould be tranſplanted into the Borders of the Flower-Garden, where they are to remain: Theſe produce their Flowers in *June* and *July*, and their Seeds are ripe in *September*. The Seeds of theſe Plants may alſo be ſown in Autumn, ſoon after they are ripe, under a warm Wall or Hedge, where they will endure the Cold of our ordinary Winters very well; and in the Spring they may be tranſplanted out into the Borders, where they are deſign'd to flower: And theſe autumnal Plants will grow much larger, and come to flower much ſooner than thoſe rais'd in the Spring, and from theſe you will always have good Seeds.

LINGUA CERVINA; Hart's-Tongue.

Theſe Plants do commonly grow out from the Joints of old Walls and Buildings, where they are moiſt and ſhady, but are ſeldom cultivated in Gardens: There is a very great Variety of theſe Plants both in the *Eaſt* and *Weſt-Indies*, but there are very few of them in *Europe:* They may be propagated by parting their Roots, and ſhould have a moiſt Soil, and ſhady Situation.

LINUM; Flax.

The *Characters* are;

The Leaves, for the moſt part, grow alternately on the Branches; the Cup of the Flower conſiſts of one Leaf, is tubulous, and divided into five Parts at the Top; the Flower conſiſts of five Leaves, which expand in Form of a Clove-Gilli-flower; the Ovary, which riſes from the Center of the Flower-cup, becomes an almoſt globular Fruit, which is generally pointed, and compos'd of many Cells, in which are lodg'd many plain, ſmooth Seeds, which are blunt at one End, and generally ſharp at the other.

The *Species* are;

1. LINUM; *ſativum. C. B. P.* Manur'd Flax.
2. LINUM; *ſativum, latifolium, Africanum, fructu majore. Tourn.* Broad-leav'd African manur'd Flax, with a large Fruit.
3. LINUM; *maritimum, luteum, C. B. P.* Yellow Maritime Flax.
4. LINUM; *ſativum, humilius, flore majore. Bobart.* Dwarf manur'd Flax, with a larger Flower.
5. LINUM; *perenne, majus, caruleum, capitulo majore. Mor. Hiſt.* Greater perennial blue Flax, with a large Head.
6. LINUM; *perenne, majus, caruleum, capitulo minore. Mor. Hiſt.* Greater perennial blue Flax, with a ſmaller Head.

There are ſeveral Sorts of this Plant which are preſerv'd in ſome curious Gardens of Plants for Variety Sake; but as they are of little Uſe or Beauty, ſo it would be needleſs to mention them in this Place.

The firſt Sort is that which is cultivated for Uſe in divers Parts of *Europe*, and is reckon'd an excellent Commodity; the right Tilling and Ordering of which is eſteem'd a good Piece of Husbandry.

This ſhould be cultivated upon a rich Soil, that has not been plough'd for ſeveral Years, upon which Flax always makes the beſt Improvement; but as it draws greatly from the Soil, ſo it ſhould not be ſown two Years together upon the ſame Ground.

The Land muſt be well plough'd, laid flat and even, upon which the Seeds ſhould be ſown about the Middle of *March*, when the Weather is mild and warm: During the Spring you muſt carefully weed it; which if neglected, (eſpecially in a moiſt Seaſon) the Weeds will overgrow and deſtroy the Crop. There are ſome People who recommend the feeding of Sheep with Flax, when 'tis a good Height, and ſay, they will eat away the Weeds and Graſs, and do the Flax good; and if they ſhould lie in it, and beat it down, or flatten it, it will riſe again the next Rain: But this muſt not be practis'd but in a moiſt Seaſon, and upon a rich Soil, for if the Ground be poor, or the Spring dry, it will not riſe again to any conſiderable Height.

The beſt Seed is that which comes from the Eaſt Country, and is known by the Name of *Riga Flax*; for if the *Engliſh* Seed be ſown three or four times, it is very apt to degenerate: If the Seed be good, two Buſhels will be enough to ſow an Acre; but if it be but middling, there ſhould be a greater Allowance: Toward the latter End of *July* the Flax will begin to ripen; when you muſt be careful that it grow not over ripe, therefore you muſt pull it up as ſoon as the Heads begin to change brown and hang downwards, otherwiſe the Seeds will ſoon ſcatter and be loſt; ſo that the Pluckers muſt be nimble, and tie it up in Handfuls, ſuls, ſetting them upright till they be perfectly dry, and then Houſe them: If the Flax be pull'd when it firſt begins to flower, it will be whiter and ſtronger than if it ſtand till the Seed is ripe, but then the Seed will be loſt.

The Method of Watering, Piling, Braking, &c. being a particular Buſineſs, and foreign to my Deſign, I ſhall not pretend to give any Directions about it in this Place.

All the other Sorts of Flax may be cultivated (by ſuch who have a Curioſity) by ſowing their Seeds upon a Bed of freſh, rich, light Earth, in *March* or the Beginning of *April*; and when the Plants come up, they muſt be carefully weeded, which is all the Culture they require, and they will produce their Flowers and perfect their Seeds very well.

LINUM UMBILICATUM; *vide* Omphalodes.

LIQUID AMBER; *vide* Styrax.

LITHOSPERMUM; Gromwell, Gromill, or Graymill.

The *Characters* are;

The Cup of the Flower conſiſts of one Leaf, which is cut almoſt to the Baſe into five long narrow Segments; the Flower, which is, for the moſt part, ſmall, conſiſts of one Leaf, is Funnel-ſhap'd, and ſpread open at the Top; the Pointal is encompaſs'd by four Embryo's, which become ſo many roundiſh hard poliſh'd Seeds.

The *Species* are;

1. Lithospermum; *majus, erectum. C. B. P.* Greater Upright Gromill.

2. Lithospermum; *perenne, procumbens, flore purpureo cæruleo majore. Mor. Hiſt.* Trailing perennial Gromill, with a purple-blue Flower.

There are ſeveral other Sorts of this Plant, which are mention'd in Botanick Authors, but as they are rarely cultivated in Gardens, I ſhall omit taking Notice of them in this Place. The firſt Sort here mention'd, is that which is order'd for Medicinal Uſes: This grows in ſhady Lanes and uncultivated Places in divers Parts of *England*, and is ſeldom cultivated in Gardens. The ſecond Sort is found wild in ſome Parts of *Wales*, but is leſs common than the former. Theſe may be cultivated by ſowing their Seeds ſoon after they are ripe, in a Bed of freſh Earth, allowing them at leaſt a Foot Diſtance from each other, obſerving to keep them clear from Weeds, and they will thrive in almoſt any Soil or Situation.

LOAM is a common ſuperficial Earth, that is a Mixture of Sand and Clay, commonly of a yellowiſh Colour, though there is ſome *Loam* that is blackiſh: Some call *Loam* the moſt common ſuperficial Earth met with in *England*, without any Regard to the Portion it bears to Sand or Clay.

It is found, by Experience, that moſt Sorts of Plants will grow in it; and where-ever it is found, it appears to be a more beneficial Soil to Plants than any other. A Clay us'd in Grafting is alſo call'd *Loam*.

LOBUS ECHINATUS; Bonduc or Nicker-Tree.

The *Characters* are;

The Leaves are equally pinnated; the Flower conſiſts of one Leaf, which is cut into may deep Segments, and is almoſt an anomalous Figure; from the Cup ariſes the Piſtillum, which becomes a rough, prickly Pod, in which are contain'd one or two hard roundiſh Seeds.

The *Species* are;

1. Lobus Echinatus; *fructu flavo, foliis rotundioribus. H. L.* The Yellow Nicker Tree.

2. Lobus Echinatus; *fructu cæſio, foliis longioribus. H. L.* The Aſh-colour'd Nicker, *vulgò.*

Theſe two Plants are very common in *Jamaica*, *Barbados*, and all the *Caribbee Iſlands*, where they climb upon the Shrubs and Trees which grow near them: The Leaves, Branches, Stems, and every Part of them are greatly beſet with Prickles, which render it very troubleſome to paſs between them where they grow pretty cloſe.

They are preſerv'd in the warmeſt Stoves, by way of Curioſity, in *England*, but have not as yet produc'd any Flowers with us, that I have ſeen. The Seeds of this Plant are often brought over from the *Weſt-Indies*, but their Shells or Coverings are ſo very hard, as not to be eaſily broken; nor do they ever come up when ſown upon a Hot-bed as other Seeds: The only Method by which I have been capable of raiſing theſe Plants, is, to put the freſh Seeds into a freſh Hot-bed of Tanner's-Bark, under the Bottom of a Pot, (in which there is a Plant growing) where, from the Heat of the Bark, and the Moiſture which will gently paſs through the Hole at the Bottom of the Pot, and being by the Bark there detain'd, the Shell of the Fruit will ſplit, and the Seeds germinate in a ſhort Time; then they may be taken up, and planted into Pots fill'd with light freſh Earth, and plung'd into the Tanner's-Bark, where they will come on apace, if conſtantly ſupply'd with Water: During the Winter-ſeaſon they muſt be kept very warm, and often refreſh'd with Water; but it muſt be given them by ſmall Quantities each Time, for if they have too much Moiſture given them at that Seaſon, it is very apt to deſtroy them: In the Summer-time, when the Weather is warm, they will require a greater Share of Air, but they muſt never be ſet Abroad, even in the hotteſt Seaſon, for they are too tender to bear the open Air in our Climate, ſo that they muſt be conſtantly preſerv'd in the Stoves with *Papaws*, and other free-growing Plants which come from the ſame Country.

LONCHITIS; Rough Spleenwort.

The *Characters* are;

The Leaves are like thoſe of the Fern, *but the Pinnulæ are ear'd at their Baſe: The Fruit alſo is like that of the* Fern.

The *Species* are;

1. Lonchitis; *aſpera. Ger.* Rough Spleenwort.

2. Lonchitis; *aſpera, major. Ger. Emac.* Greater Rough Spleenwort.

The firſt of theſe Plants is very common in ſhady Woods, by the Sides of the ſmall Rivulets in divers Parts of *England*: But the ſecond Sort is not quite ſo common, and has been brought into ſeveral curious Botanick Gardens from the Mountains in *Wales*. There is alſo great Variety of theſe Plants in *America*, which at preſent are Strangers in the *European* Gardens. They are ſeldom cultivated but in Botanick Gardens, for the Sake of Variety, where they muſt have a moiſt Soil, and a ſhady Situation.

LOPPING: It is very obſervable, that moſt old Trees are hollow within; which does not proceed from the Nature of the Trees, but is the Fault of thoſe who have the Management of them, who ſuffer the Tops to grow large before they lop them, as the *Aſh*, *Elm*, *Horn-beam*, &c. and perſuade themſelves that they may have the more great Wood; but, in the mean Time, don't conſider that the cutting off great Tops do endanger the Life of a Tree, or, at beſt, wound it ſo that many Trees decay more in their Bodies, than the yearly Tops come to; and at the ſame Time that they furniſh themſelves with more great Wood, they do it at the Loſs of the Owner. And, indeed, though the *Horn-Beam* and *Elm* will bear great Tops when the Body is little more than a Shell, yet the *Aſh*, if it comes to take Wet at the Head, very rarely bears more Top after the Body of the Tree decays: Therefore, if once theſe Trees decay much in the Middle, they will be worth little but for the Fire; ſo that if you find a Timber Tree decay, it ſhould be cut down in Time, that the Timber be not loſt.

The *Lopping* of young Trees, that is, at ten or twelve Years old at moſt, will preſerve them much longer, and will occaſion the Shoots to grow more into Wood in one Year, than they do in old Tops at two or three. Great Boughs ill taken off, often ſpoil many a Tree; for which Reaſon they ſhould always be taken off cloſe and ſmooth, and not parallel to the Horizon; and cover the Wound with Loam and Horſe-dung mix'd, to prevent the Wet from entring the Body of the Tree.

When Trees are at their full Growth, there are ſeveral Signs of their Decay; as, the withering or dying of many of their top Branches; or if the Wet enters at any Knot; or they are anywiſe hollow, or diſcolour'd; if they make but poor Shoots; or if Wood-Peckers make any Holes in them.

All Sorts of Reſinous Trees, or ſuch as abound with a Milky Juice, ſhould be lopp'd very ſparingly; for they are very ſubject to decay when often cut. The beſt Seaſon for Lopping theſe Trees is ſoon after *Bartholomew-tide*, at which Time they ſeldom bleed much, and the Wound is commonly heal'd over before the cold Weather comes on.

LOTUS: Bird's-foot Trefoil.

The *Characters* are;

It hath a papilionaceous Flower; the Ovary which riſes out of the Flower-cup, afterwards becomes a Pod, ſometimes diſtinguiſh'd as it were into Cells, by tranſverſe Partitions, which are full of Seeds, for the moſt part roundiſh; to which may be added, the Leaves grow by threes, but have two Wings or little Leaves at the Origin of their Footſtalks.

The *Species* are;

1. Lotus; *villoſus, altiſſimus, flore glomerato. Tourn.* The talleſt hairy Birds-foot Trefoil, with a glomerated Flower.

2. Lotus; *pentaphyllus, ſiliquoſus, villoſus. C. B. P.* Upright hoary Birds-foot Trefoil.

3. Lotus; *πολυκέρατος, fruteſcens, Cretica, argentea, ſiliquis longiſſimis, propendentibus, rectis. Mor. Hiſt.* Shrubby Silver Birds-foot Trefoil of Crete, with long ſtrait hanging Pods.

4. Lotus; *hæmorrhoidalis, humilior & candidior. Tourn.* Lower and whiter Hæmorrhoidale Birds-foot Trefoil.

5. Lotus; *anguſtifolius, flore luteo, purpureo, ex inſulâ ſancti Jacobi. Hort. Amſt.* Narrow-leav'd Birds-foot Trefoil from the Iſland of St. *James*, with a purple yellow Flower.

6. Lotus; *ruber, ſiliqua anguloſa. C. B. P.* Red ſquare-codded Birds-foot Trefoil, *commonly called*, Winged Peas.

7. **Lotus**; *ruber, ſiliquâ angulosâ, folio variegato. Boerh. Ind.* Red ſquare-codded Birds-foot Trefoil, with a variegated Leaf.

8. **Lotus**; *ſiliquis ornithopodii. C. B. P.* Birds-foot Trefoil, with Pods like a Birds-foot.

The firſt of theſe Plants is by ſome ſuppoſed to be the *Cytiſus* of *Virgil*; but with how much Juſtneſs I will not pretend to determine, ſince it is very difficult to aſcertain many of his Plants; for the greateſt Part of them are only tranſlated from *Theocritus*'s *Greek* into *Latin*, ſo that it may juſtly be ſuppoſed that *Virgil* himſelf did not know the Plants of which he wrote; and whoever has a Curioſity to know what the Plants there mention'd are, ſhould diligently ſearch for them in *Sicily* where *Theocritus* lived, and it is very probable many of them are ſtill to be found.

This Plant dies to the Ground with us every Winter, and riſes again the ſucceeding Spring, and when the Roots are ſtrong, the Shoots will be four or five Feet high, and produce in great Plenty: If it be cut while young, the *Cows* are very fond of it; but *Horſes* will not eat it, unleſs they are very hungry. The Roots when ſtrong, will admit of the Shoots being cut three or four times in a *Summer*, for they put out again ſoon after they are cut, and grow very ſtrong in a ſhort time; but this Plant does not come up before *April* in our Country, and commonly dies down in *October*, ſo that if it were the beſt Fodder for Cattle, it could only be obtained in Summer, for I am afraid it will hardly be of any uſe when dried.

It may be propagated from the Seeds, which are generally produced in great Plenty, and muſt be ſown very thin in Rows, at about eighteen Inches aſunder, the Beginning of *April*; and in *May*, when the Plants will be come up, the Ground ſhould be hoe'd between the Rows, in order to deſtroy the Weeds, and the Plants cut up, where they are too thick (for they ſhould be eight or ten Inches apart in the Rows at leaſt) for though they will appear but weak at their firſt coming up, yet when their Roots have taken faſt hold of the Ground, they will increaſe their Strength greatly; I have had a ſingle Root of this Plant, which has been a Foot diameter over the Crown, and hath produced above a hundred Shoots at one Time.

You muſt alſo continuing hoeing the Ground from Time to Time as the Weeds are produced, which if permitted to over-grow the Plants while they are young, will certainly deſtroy them; ſo that the firſt Seaſon they muſt be managed with great Care, but afterwards when the Plants have obtain'd more Strength, they will be capable of encountering the Weeds; though then the Ground between the Rows ſhould be ſtirr'd with a Breaſt-plough after the Crop is cut down, which will greatly promote its Growth.

This Plant delights in a dry, barren, gravelly Soil, on which it will reſiſt the ſevereſt Cold of our Climate, and abide many Years.

It may alſo be propagated by planting Cuttings or Slips taken from the old Plants in *July*, when they have acquired a Hardneſs, which ſhould be planted in a moiſt, cloudy Seaſon, or water'd and ſhaded, and in a ſhort Time they will take Root; but as this is difficult to perform when a Quantity is deſign'd, ſo the better Way is to propagate it by Seeds.

The ſecond, third, fourth and fifth Sorts are preſerved in Gardens as Curioſities; theſe are impatient of much Cold, and muſt therefore be planted in Pots, and houſed in Winter, otherwiſe they are often deſtroy'd in our Country, eſpecially the fifth, which is much the tendereſt Plant of all the Sorts: Theſe may be all propagated by ſowing their Seeds upon a moderate Hot-bed in the *Spring*, and when the Plants are come up, they muſt be tranſplanted either upon another moderate Hot-bed, or into Pots, and plung'd into a Hot-bed, to promote their taking Root, after which in *May* they ſhould be removed into the open Air, where they muſt be placed in ſome well-ſhelter'd Situation, amongſt other exotick Plants, in which Place they may remain until the Middle or End of *October* following, when they muſt be removed into the Green-houſe, obſerving to place them where they may have as much free Air as poſſible in mild Weather; for if they are kept too cloſely ſhut up, or ſtand under the Branches of other Trees or Plants, they are very apt to draw very weak, and decay ſoon after; they muſt alſo be often refreſh'd with Water, but it ſhould not be given them in Winter in too great Quantities, for that will rot their Roots, eſpecially of the fifth Sort, which, as I before ſaid, is the tendereſt: In the *Spring* they ſhould be inured very early to the open Air, into which they ſhould always be remov'd at the Beginning of *May*, or earlier, according as the Seaſon proves favourable.

Theſe may alſo be propagated by planting Cuttings, in any of the Summer Months, into a Bed of light Earth, obſerving to water and ſhade them until they have taken Root; after which they may be planted into Pots fill'd with light freſh Earth, and muſt be managed as was directed for the Seedling Plants. They all produce their Flowers in *June*, *July*, and *Auguſt*, and moſt of them ripen their Seeds very well in *England*: But the fifth Sort, which is the moſt rare, and produces the handſomeſt Flowers, ſeldom perfects Seeds with us, ſo that it muſt be always propagated from Cuttings; and in Winter muſt be placed ſomewhat warmer than the other Sorts, tho' not too near other Plants; and ſhould be every Year renew'd from Cuttings; for the old Plants are very ſubject to decay in Winter. The ſixth Sort is an annual Plant, which, by many People, is ſown here and there, upon the Borders of the Flower-Garden, with other ſmall Annuals, amongſt which it makes a pretty Variety.

The Flowers of this Plant (which are in Form of a *Pea-bloſſom*) are of a deep-red Colour, and are ſucceeded by Pods with four Angles or Wings (which occaſion'd their being call'd *Wing'd Peas*) containing ſeveral hard round Seeds.

It is eaſily propagated by ſowing the Seeds in *March* or *April* upon the Borders where they are to remain; for they do not thrive ſo well when tranſplanted: And they will require no farther Care than only to keep them clear from Weeds. In *June* they will begin to flower, and continue till *Auguſt*, when their Seeds will ripen ſoon after.

The ſeventh Sort is only a Variety of the ſixth, from which it differs in having a variegated Leaf; this Difference it commonly retains from Seeds, which is what few other Plants will do. This may be propagated as the former.

The eighth Sort is only preſerv'd in ſome Gardens, more for the Oddneſs of its Pods (which very much reſemble a Bird's Foot) than for any particular Beauty of the Plant: But in a large Garden it may be admitted, for the ſake of Variety. This may be propagated in the ſame Manner as the two former, and is alſo annual, as they are.

LOTUS ARBOR; *vide* Celtis.

LOVE APPLE; *vide* Lycoperſicon.

LUNARIA; Moon-wort, Satten-Flower, *or* Honeſty.

The *Characters* are;

The Flower conſiſts of four Leaves, which expand in Form of a Croſs: The Ovary (which riſes in the Centre of the Flower) becomes a compreſs'd perfectly ſmooth Fruit, divided, as it were, into two Cells by an intermediate Partition, to which adhere the parallel and membranous Valves, and fill'd with Seeds, which have commonly a broad Border, and are ſhap'd like a Kidney.

The *Species* are;

1. Lunaria; *major, ſiliquâ rotundiore. J. B.* Greater Moon-wort, with round Pods, *commonly call'd* Honeſty, *or* White Sattin.

2. Lunaria; *major, ſiliquâ longiore. J. B.* Greater Moon-wort, with a longer Pod.

3. Lunaria; *major, perennis, ſiliquâ rotundiori, flore albo. Tourn.* Greater perennial Moon-wort, with a rounder Pod, and a white Flower.

4. Lunaria; *Leucoji folio, ſiliquâ oblongâ majori. Tourn.* Moon-wort, with a Stock-July-flower Leaf, and a large oblong Pod.

5. Lunaria; *fruticoſa perennis, incana, Leucoji folio. Tourn.* Shrubby perennial Moon-wort, with a Stock-July-flower Leaf.

6. Lunaria; *Orientalis, Leucoji folio incano, lutea patula. Jeſſieu.* Yellow ſpreading Eaſtern Moon-wort, with a Stock-July-flower Leaf.

7. Lunaria; *perennis lutea, folio Leucoji, ramis expanſis. Vaill.* Branching yellow perennial Moon-wort, with a Stock-July-flower Leaf.

There are ſome other Varieties of this Plant, which are preſerv'd in curious Botanick Gardens: But thoſe here mention'd are the beſt worth cultivating, for their Beauty.

The firſt of theſe Plants is very common in moſt old Gardens in *England*, and is commonly known by the Name of *Honeſty*, or *White Satten*: It requires very little Culture, and ſhould be ſown ſoon after the Seeds are ripe in Autumn, upon a Bed or Border of common Earth, in almoſt any Situation (provided it be not under the Dripping of Trees) in which Place they ſhould be ſuffer'd to remain; for they ſeldom thrive well if tranſplanted; and in *May* following they will produce Flowers, and the Seeds will ripen in *Auguſt*. The Seed-veſſels of this Plant, when they are full ripe, become very tranſparent, and of the Appearance of White Satten, at which Time the Branches are cut off and dry'd; after which, they are preſerv'd to place in the Chimnies of Halls and large Rooms, where they appear very agreeable.

The other Sorts may be all propagated in the ſame Manner as the former, with this Difference, *viz.* That as they are ſomewhat tenderer, ſo they ſhould have a warmer Situation, otherwiſe they are ſubject to be deſtroy'd in very cold Winters: They ſhould alſo have a dry Soil, which ſhould be freſh, but not dung'd; for if the Soil be too rank, they often canker and decay, eſpecially in wet Seaſons.

Theſe Plants are all of them pretty Varieties in large Gardens where there is Room: But they are ſeldom cultivated in ſmall Places, eſpecially the two firſt Sorts, which grow pretty large, and take up too much Room. Their Flowers are not very beautiful: But for the Oddneſs of their Seed-veſſels, as alſo the different Appearances of the Plants, they may be admitted.

The third, fifth, and ſixth Sorts are perennial Plants, which may be propagated by planting Cuttings of any of them in the Summer Months, in a ſhady Border of light freſh Earth, obſerving to water them until they have taken Root; after which, they may be remov'd into the Places where they are to remain, and muſt be treated as thoſe Plants which were rais'd from Seeds.

LUPINUS; Lupine.

The *Characters* are;

It hath a papilionaceous Flower, out of whoſe Empalement riſes the Pointal, which afterwards turns into a Pod, that is fill'd with either plain or ſpherical Seeds. To which may be added, the Leaves grow like Fingers upon the Footſtalks.

The *Species* are;

1. LUPINUS; *ſylveſtris, purpureo flore, ſemine rotundo vario. J. B.* Wild *Lupine*, with a purple Flower, and round variegated Seed, *commonly call'd* The Leſſer Blue Lupine.

2. LUPINUS; *anguſtifolius, caruleus elatior. Raii Hiſt.* Narrow-leav'd Taller Blue *Lupine.*

3. LUPINUS; *ſylveſtris, flore luteo. C. B. P.* The common Yellow *Lupine.*

4. LUPINUS; *peregrinus, major, vel villoſus caruleus major. C. B. P.* Foreign Greater Hairy *Lupine*, with a large blue Flower, *commonly call'd* The Great Blue Lupine.

5. LUPINUS; *peregrinus, major, flore incarnato. H. L.* Foreign Greater *Lupine*, with a Fleſh-colour'd Flower, *commonly call'd* The Roſe Lupine.

6. LUPINUS; *ſativus, flore albo. C. B. P.* Garden or Manured Lupine, with a white Flower.

7. LUPINUS; *caruleus, minor, perennis, Virginianus, repens. Mor. Hiſt.* Smaller Perennial Creeping Blue Lupine of Virginia.

There are ſeveral other Varieties of this Plant, which are preſerv'd in ſome curious Botanick Gardens, that differ chiefly in the Colour and Size of their Flowers and Fruit; but thoſe here mention'd are ſuch as generally are preferr'd; for the Beauty of their Flowers, for which alone they are propagated in the *Engliſh* Gardens.

The firſt Sort is very common in every Garden, being ſown in the Borders of the Flower-Garden, with other hardy Kinds of annual Plants, which do not require the Aſſiſtance of a Hot-bed to bring them forward. The Seeds of this, and the common *Yellow* and *White Lupines*, are very common at every Seed-ſhop, where they are generally ſold at a very reaſonable Price. Theſe Seeds may be ſown in *April, May*, and *June*, in order to continue a Succeſſion of their Flowers through the *Summer*.

They muſt be ſown where they are to remain, for they ſeldom do well if tranſplanted: They love a light Soil, not too rich or moiſt; in both which they are very ſubject to rot, before they perfect their Seeds.

Theſe produce their Flowers ſucceſſively in *June*, *July*, and *Auguſt*, according to the Time of their being ſown, and do commonly grow about two Feet high; ſo that if they are rightly diſpos'd amongſt other annual Plants of the ſame Growth in Borders, they make an agreeable Variety. The Seeds of theſe Plants ſhould always be ſown in dry Weather, for if there ſhould happen to be much Wet ſoon after they are put into the Ground, it commonly rots them. The blue and white Sorts have no Scent, but the yellow has a very agreeable Odour, for which it is commonly preferr'd by moſt People to the others.

The narrow-leav'd, tall, blue *Lupine* is not ſo common in *England* as the other Sorts, tho' in *Italy* and *Spain* it is one of the moſt common: In the former of which Places it is ſown to improve the Ground which is deſign'd for Vineyards; where, when the *Lupines* are in Flower, they cut them down, and plough 'em into the Ground as Manure: Or, if they have not Time enough to do this, they parboil the Seeds to prevent their growing, and ſow them upon the Ground (allowing ſixteen Buſhels to an Acre) and plough them in; ſo that in theſe Countries it is a valuable Plant.

The fourth and fifth Sorts are ſtill more rare than any of the former, and only to be found in ſome curious Gardens (eſpecially the fourth, which was formerly very common, but is now almoſt loſt amongſt us:) Theſe Plants do grow three Feet high, and ſpread out into many Branches, which are furniſh'd with fine Spikes of large Flowers, which make a handſome Appearance, and continue a long Time in Beauty. The Seeds of theſe Plants ſhould be ſown very early in the *Spring*, upon a warm dry Border, where they muſt remain to flower, for if they are ſown late, they ſeldom perfect their Seeds with us; therefore the better Way is to ſow them in *Auguſt*, under a warm Wall or Hedge, where the Plants will come up, and endure the Cold of our ordinary Winters very well: And theſe Plants will flower earlier the ſucceeding *Summer*, and never fail to produce ripe Seeds, whereas thoſe ſown in the *Spring* do very often miſcarry.

The ſeventh Sort is an abiding Plant, which grows in great Plenty in *America*; from whence the Seeds have been brought into *England*, where it thrives very well, provided it be ſuffer'd to remain in the Place where it was ſown, for the Roots of this Plant commonly run very deep into the Ground, which by removing are commonly broken, after which the Plant ſeldom does well. This ſhould be ſown on a light dry Soil, in which it will thrive very well, and continue ſeveral Years, producing fine Spikes of blue Flowers; but this Sort rarely perfects its Seeds in this Country.

LUPULUS; The Hop.

The *Characters* are;

It hath a creeping Root; the Leaves are rough, angular, and conjugated; the Stalks do climb and twiſt about whatever is near them; the Flowers are Male and Female *on different Plants; the Male Flowers conſiſt of a Calix divided into five Parts, which ſurrounds the Stamina, but has no Petals to the Flower; the Female Plants have their Flowers collected into ſquamoſe Heads, which grow in Bunches; from each of the leafy Scales is produc'd an horned Ovary, which becomes a ſingle roundiſh Seed.*

The *Species* are;

1. Lupulus; *mâs. C. B. P.* The Male Hop, *commonly call'd,* The Wild Hop.

2. Lupulus; *fœmina. C. B. P.* The Female *or* manur'd Hop.

Of this laſt Sort, the People who cultivate them, reckon three different Varieties; as firſt, The long and ſquare Garlick *Hop*, the long White *Hop*, and the Oval *Hop*; all which are indifferently cultivated in *England:* But of the Male *Hop*, there has been no Notice taken of any different Varieties. This Sort grows wild in Hedges in divers Parts of *England*, but is never cultivated, as being of no Uſe.

There being the greateſt Plantation of *Hops* in *Kent* that are in any County in *England*, it is very probable that their Method of planting and ordering them ſhould be the beſt.

As for the Choice of their *Hop-Grounds*, they eſteem the richeſt and ſtrongeſt Grounds as the moſt proper; they chuſe a warm dry Soil, that has a good Depth of hazel Mould, and if it be rocky within two or three Feet of the Surface, the *Hops* will proſper well, but they will by no means thrive on a ſtiff Clay, or ſpungy wet Land.

If it may be, chuſe a Piece of Meadow or Lay-Ground to plant *Hops* on, ſuch as has not been till'd or ſown for many Years, or an old decay'd Orchard; for Land that is worn out by long bearing of Corn will require abundance of Dung to bring it into any tolerable Condition to bear a Crop of *Hops*.

They accounting new Land beſt for *Hops*, the *Kentiſh* Planters plant their *Hop-Gardens* with *Apple-trees* at a large Diſtance, and with *Cherry-trees* between; that when the Land hath done its beſt for *Hops*, which they reckon it will in about ten Years, the Trees may begin to bear: The *Cherry-trees* laſt about thirty Years; and by that Time the *Apple-trees* are large, they cut down the *Cherry-trees*.

The *Eſſex* Planters account a moory Land the propereſt for *Hops*, tho' there are ſeveral other Sorts of Soil that are eſteem'd very good.

Some account that Land that has a roſſelly Top, and a brick-earthy Bottom, the beſt: A true Roſſel or light Land is what they generally plant in, whether it be white or black.

Moory Land is of different Sorts; ſome being fix'd and heavy, ſo as to crack in Summer; and ſome ſo light, that in dry Seaſons it will blow away with the Wind; and ſome are of a middle Conſiſtence, being compos'd of both.

Theſe Moors, for Goodneſs and Value, are according to the Nature and Goodneſs of the Soil that is underneath them; which being flung up upon the Surface, will make a very good Mixture, it being beſt to fling the under Soil downward for *Hops*, becauſe they naturally root downwards, ſometimes four or five Yards deep, and therefore the deepeſt and richeſt Soil is beſt for them.

Few are acquainted with the Value of Moors, becauſe they do not ſearch into the Bottom of them, by reaſon of the Expenſiveneſs of doing it, and the Difficulty of carrying off the Water.

If the Land be moiſt, it ought to be laid up in high Ridges, and to be well drain'd, and the Drain kept clear and open, eſpecially in Winter, that the Water do not rot, or too much chill the Roots.

If the Land be ſour, or cold, it will be very much help'd by burning it; and if the Haulm and Strings of the *Hops* be burnt every Year, and ſome of the Paring or Sides of the Garden or Earth be laid on them as they burn, and then more Haulm be laid over that, and ſo continued Layer upon Layer, it will make an excellent Compoſt to make the Hills with.

As to the Situation of a *Hop-Ground*, one that inclines to the South or Weſt is the moſt eligible; but if it be expos'd to the North-Eaſt or South-Weſt Winds, there ſhould be a Shelter of ſome tall Trees at a Diſtance, becauſe the North-Eaſt are apt to nip the tender Shoots in the Spring, and the South-Weſt frequently break and blow the Poles at the latter End of the Summer, and very much endanger the *Hops*.

Hops require to be planted in an open Situation, that the Air may freely paſs round and between them, to dry up and diſſipate the Moiſture, whereby they would not be ſo ſubject to Fire-blaſts, which often deſtroy the Middles of large Plantations, while the Outſides remain unhurt.

As for the Preparation of the Ground for Planting, it ſhould, the Winter before, be plough'd and harrow'd even; and then lay upon it in Heaps a good Quantity of freſh, rich Earth, or well-rotted Dung and Earth mix'd together, ſufficient to put half a Buſhel in every Hole to plant the *Hops* in, unleſs the natural Ground be very freſh.

Then lay a Line acroſs it, from the Hedge, in which Knots have been ty'd, at the Diſtance you deſign your *Hop-hills* to be at, about eight or nine Feet Diſtance the whole Length of the Ground, and place a ſharp pointed Stick at every Knot; then lay aſide the Line, and with two forked Sticks of about eight or nine Feet long, you may from that firſt Row ſet out the whole Ground, by applying the two Forks to two of the Sticks which were firſt ſet up, and placing another Row at the Ends where the forked Sticks meet triangularwiſe: Then you ſhould dig a Hole at every Stick about a Foot and a half wide, and fill it full of the good Earth you brought in.

If you plough the Ground with Horſes between the Hills, it will be beſt to plant them in Squares Checquerwiſe, but the *Quincunx* Form is the moſt beautiful, and it will alſo be better for the *Hop*: But if the Ground be ſmall, that it may be done with the Breaſt-Plough or Spade, it will do very well; but which Way ſoever you make uſe of, a Stake ſhould be ſtuck down at all the Places where the Hills are to be made.

Perſons ought to be very curious in the Choice of the Plants and Sets as to the Kind of *Hop*; for if the *Hop-Garden* be planted with a Mixture of ſeveral Sorts of *Hops*, that ripen at ſeveral Times, it will cauſe a great deal of Trouble and be a great Detriment to the Owner.

The two beſt Sorts are the white and the grey Bind; the latter is a large ſquare *Hop*, more hardy, and is the more plentiful Bearer, and ripens later than the former.

There is alſo another Sort of the white Bind, which ripens a Week or ten Days before the common; but this is tenderer, and a leſs plentiful Bearer: But it has this Advantage, it comes firſt to Market.

But if three Grounds, or if three diſtant Parts of one Ground be planted with theſe three Sorts, there will be this Conveniency, that they may be pick'd ſucceſſively as they become ripe.

The Sets ought to be procur'd out of Grounds that are intirely of the ſame Sort you would have; they ſhould be five or ſix Inches long, with three or more Joints or Buds on them, all the old Bind and hollow Part of the Set being cut off.

If there be a Sort of *Hop* you value, and would increaſe Plants and Sets from, the ſuperfluous Binds may be laid down when the *Hops* are ty'd, cutting off the Tops, and burying them in the Hills; or when the *Hops* are dreſs'd, all the Cuttings may be ſav'd, and laid in Rows in a Bed of good Earth, for almoſt every Part will grow, and become a good Set the next Spring.

Some have try'd to raiſe a *Hop-Ground* by ſowing Seeds; but that turns to no Account, becauſe that Way is not only tedious, but the *Hops* ſo produc'd are commonly of different Kinds, and many of them wild and barren.

As to the Seaſons of planting *Hops*, the *Kentiſh* Planters beſt approve the Months of *October* and *March*, both which ſucceed very well; but the common Sets are not to be had in *October*, unleſs from ſome Ground that is to be digged up and deſtroy'd; and likewiſe there is ſome Danger, that the Sets may be rotted if the Winter proves very wet: But the moſt uſual Time of procuring them is in *March* when the *Hops* are cut and dreſſed.

As to the Manner of planting the Sets, you ſhould put five good Sets in every Hole with a Setting-ſtick; one is to be plac'd in the Middle, and the reſt round about, ſloping, the Tops meeting at the Center: They muſt ſtand even with the Surface of the Ground; let them be preſs'd cloſe with the Hand, and cover'd with fine Earth, and a Stick ſhould be plac'd on each Side the Hill to ſecure it.

The Ground being thus planted, all that is to be done more that Summer, is to keep the Hills clear from Weeds, and to dig up the Ground about the Month of *May*, and to gather up the Stones, if more are turn'd up by digging, to raiſe a ſmall Hill round about the Plants: And in *June*, you muſt twiſt the young Binds or Branches together into a Bunch or Knot, for if they are ty'd up to ſmall Poles the firſt Year, in order to have a few *Hops* from them, it will not countervail the weakning of the Plants.

A Mixture of Compoſt or Dung being prepar'd for your *Hop-Ground*, the beſt Time for laying it on, if the Weather proves dry, is about *Michaelmas*, that the Wheels of the Dung-Cart may not injure the *Hops*, nor furrow the Ground: If this be not done then, you muſt be oblig'd to wait till the Froſt has harden'd the Ground, ſo that it will bear the Dung-Cart: And this is alſo the Time to carry on your new Poles, to recruit thoſe that are decay'd, and to be caſt out every Year.

If you have good Store of Dung, the beſt Way will be to ſpread it in the Alleys, all over the Ground, and to dig it in the Winter following: The Quantity they will require, will be forty Loads to an Acre, reckoning about thirty Buſhels to the Load.

If you have not Dung enough to cover all the Ground in one Year, you may lay it on one Part one Year, and on the reſt in another, or a third, for there is no Occaſion to dung the Ground after this manner oftener than once in three Years.

Thoſe who have but a ſmall Quantity of Dung, uſually content themſelves with laying on about twenty Loads upon an Acre every Year; this they lay only on the Hills, either about *November*, or in the Spring, which laſt ſome account the beſt Time, when the *Hops* are dreſs'd, to cover them after they are cut; but if it be done at this Time, the Compoſt or Dung ought to be very well rotted and fine.

As to the dreſſing of the *Hops*: When the *Hop-Ground* is dug in *January* or *February*, the Earth about the Hills, and very near them, ought to be taken away with a Spade, that you may come the more conveniently at the Stock to cut it.

About the End of *February*, if the *Hops* were planted the Spring before, or if the Ground be weak, they ought to be dreſs'd in dry Weather; but elſe, if the Ground be ſtrong, and in Perfection, the Middle of *March* will be a good Time; and the latter End of *March*, if it be apt to produce over-rank Binds, or the Beginning of *April* may be ſoon enough.

Then having, with an Iron Picker, clear'd away all the Earth out of the Hills, ſo as to make the Stock bare to the principal Roots, with a ſharp Knife you muſt cut off all the Shoots which grew up with the Binds the laſt Year; and alſo all the young Suckers, that none be left to run in the Alley, and weaken the Hill. It will be proper to cut one Part of the Stock lower than the other, and alſo to cut that Part low that was left higheſt the preceding Year: By purſuing this Method, you may expect to have ſtronger Binds, and alſo to keep the Hill in good Order.

In dreſſing thoſe *Hops* that have been planted the Year before, you ought to cut off both the dead Tops and the young Suckers which have ſprung up from the Sets, and alſo to cover the Stocks with a Hive with fine Earth a Finger's Length in thickneſs.

About the Middle of *April* the *Hops* are to be pol'd, when the Shoots begin to ſprout up; the Poles muſt be ſet to the Hills deep into the Ground, with a ſquare Iron Pitcher or Crow, that they may the better endure the Winds; three Poles are ſufficient for one Hill: Theſe ſhould be plac'd as near the Hills as may be, with their bending Tops turn'd outwards from the Hill, to prevent the Binds from intangling, and a Space between two Poles ought to be left open to the South to admit the Sun-beams.

The Poles ought to be in Length ſixteen or twenty Feet, more or leſs, according as the Ground is in Strength; and great Care is to be taken not to over-pole a young or weak Ground, for that will draw the Stock too much and weaken it: If a Ground be over-poled, you are not to expect a good Crop from it, for the Branches which bear the *Hops* will grow very little till the Binds have over-reach'd the Poles, which they cannot do when the Poles are too long; two ſmall Poles are ſufficient for a Ground that is young.

If you wait till the Sprouts or young Binds are grown to the Length of a Foot, you will be able to make a better Judgment where to place the largeſt Poles; but if you ſtay till they are ſo long as to fall into the Alleys, it will be injurious to them, becauſe they will intangle one with another, and will not claſp about the Pole ſo readily.

Maple or *Aſpen* Poles, are accounted the beſt for *Hops*, on which they are thought to proſper beſt, becauſe of their Warmth; or elſe, becauſe the climbing of the *Hop* is furthered by means of the Roughneſs of the Bark. But for Laſtingneſs, *Aſhen* or *Willow* Poles are preferable; but *Cheſnut* Poles are the moſt durable of all.

If after the *Hops* are grown up, you find any of them have been under-poled, taller Poles may be placed near thoſe that are too ſhort to receive the Binds from them.

As to the Tying of *Hops*, the Buds that do not claſp of themſelves to the neareſt Pole when they are grown to three or four Feet high, muſt be guided to it by the Hand, turning them to the Sun, whoſe Courſe they will always follow: They muſt be bound with wither'd Ruſhes, but not ſo cloſe as to hinder them from climbing up the Pole.

This you muſt continue to do 'till all the Poles are furniſh'd with Binds, of which two or three are enough for a Pole; and all the Sprouts and Binds that you have no occaſion for are to be pluck'd up: But if the Ground be young, then none of theſe uſeleſs Binds ſhould be pluck'd up, but ſhould be wrapt up together in the Middle of the Hill.

When the Binds are grown beyond the Reach of your Hands, if they forſake the Poles, you ſhould make Uſe of a Stand-Ladder in tying them up.

Some adviſe, that if the Binds be very ſtrong, and over-grow the Poles very much, to ſtrike off their Heads with a long Switch, to increaſe their branching below.

Towards the Latter-end of *May*, when you have made an end of tying them, the Ground muſt have the Summer Digging: This is done, by caſting up with the Spade ſome fine Earth into every Hill; and a Month after this is done, you muſt pare the Alleys with a Shovel, and make the Hills up to a convenient Bigneſs.

It is not at all to be doubted but that a thorough Watering would be of very great Advantage to *Hops* in a hot dry Summer: But it is ſo much Charge and Trouble to do this, that unleſs you have a Stream at Hand to flow the Ground, it is ſcarce practicable.

When the *Hops* blow, you ſhould obſerve if there be any wild barren Hills among them, and mark them, by driving a ſharpen'd Stick into every ſuch Hill, that they may be digg'd up and replanted.

Hops, as well as other Vegetables, are liable to Diſtempers and Diſaſters, and, among the reſt, to the Fen.

The Reverend Mr. *Hales*, in his excellent Treatiſe of *Vegetable Staticks*, treating of *Hops*, gives us the following Account of the State of *Hops* in *Kent*, in the Year 1725, that he receiv'd from Mr. *Auſtin* of *Canterbury*, which is as follows:

In Mid-*April* not half the Shoots appear'd above-ground; ſo that the

Planters knew not how to plant them to the beſt Advantage.

This Defect of the Shoot, upon opening the Hills, was found to be owing to the Multitude and Variety of Vermin that lay preying upon the Roots; the Increaſe of which, was imputed to the long and almoſt uninterrupted Series of dry Weather for three Months before: Towards the End of *April* many of the *Hop-Vines* were infeſted with Flies.

About the 20th of *May* there was a very unequal Appearance, ſome Vines being run ſeven Feet, others not above three or four; ſome juſt ty'd to the Poles, and ſome not viſible: And this diſproportionate Inequality in their Size continu'd thro' the whole Time of their Growth.

The Flies now appeared upon the Leaves of the forwardeſt Vines, but not in ſuch Numbers here, as they did in moſt other Places. About the Middle of *June* the Flies increas'd, yet not ſo as to endanger the Crop; but in diſtant Plantations they were exceedingly multiply'd, ſo as to ſwarm towards the End of the Month.

June 27th ſome Specks of Fen appear'd: From this Day to the 9th of *July* was very dry Weather. At this Time, when it was ſaid that the *Hops* in moſt Parts of the Kingdom look'd black and ſickly, and ſeem'd paſt Recovery, ours held it out pretty well, in the Opinion of the moſt ſkilful Planters.

The great Leaves were indeed diſcolour'd, and a little wither'd, and the Fen was ſomewhat increas'd. From the 9th of *July* to the 23d the Fen increas'd a great deal; but the Flies and Lice decreas'd, it raining much daily. In a Week more, the Fen, which ſeem'd to be almoſt at a Stand, was conſiderably increas'd, eſpecially in thoſe Grounds where it firſt appeared.

About the Middle of *Auguſt* the Vines had done growing both in Stem and Branch; and the forwardeſt began to be in the Hop, the reſt in Bloom: The Fen continu'd ſpreading where it was not before perceiv'd; and not only the Leaves, but many of the Burrs were alſo tainted with it.

About the 20th of *Auguſt* ſome of the *Hops* were infected with the Fen, and whole Branches corrupted by it. Half the Plantations had pretty well eſcap'd hitherto, and from this Time the Fen increas'd but little: But ſeveral Days Wind and Rain in the following Week ſo diſtorted them, that many of them began to dwindle, and at laſt came to nothing; and of thoſe that then remain'd in Bloom, ſome never turn'd to *Hops*; and of the reſt which did, many of them were ſo ſmall, that they very little exceeded the Bigneſs of a good thriving Burr.

We did not begin to pick till the 8th of *September*, which is eighteen Days later than we began the Year before: The Crop was little above two hundred on an Acre round, and not good. The beſt *Hops* ſold this Year at *Way-Hill* for ſixteen Pounds the Hundred.

The Reverend Mr. *Hales*, in his aforeſaid Treatiſe, gives us an Account of the following Experiment that he made on *Hop-Vines*: He tells us, That at *July* he cut off two thriving *Hop-Vines* near the Ground, in a thick, ſhady Part of the Garden, the Pole ſtill ſtanding; he ſtript the Leaves off from one of theſe Vines, and ſet their Stems in known Quantities of Water in little Bottles; that with Leaves imbib'd in a twelve Hours Day four Ounces, and that without Leaves three-fourths of an Ounce.

He took another *Hop-Pole* with its Vines on it, and carry'd it out of the *Hop-Ground* into a free and open Expoſure; theſe imbib'd and perſpir'd as much more as the former in the *Hop-Ground:* Which is, doubtleſs, the Reaſon why the *Hop-Vines* on the Outſides of Gardens, where they are moſt expos'd to the Air, are ſhort and poor, in compariſon of thoſe in the Middle of the Ground, *viz.* becauſe being much dry'd, their Fibres harden ſooner, and therefore they cannot grow ſo kindly as thoſe in the Middle of the Ground, which, by Shade, are always kept moiſter, and more ductile.

The ſame curious Author proceeds as followeth: Now there being 1000 Hills in an Acre of Hop-Ground, and each Hill having 3 Poles, and each Pole 3 Vines, the Number of Vines will be 9000, each of which perſpiring 4 Ounces, the Sum of all the Ounces perſpired by an Acre in 12 Hours Day will be 36000 Ounces = 15750000 Grains = 62007 Cube Inches, or 220 Gallons; which divided by 6272640, the Number of ſquare Inches in an Acre, it will be found that the Quantity of Liquor perſpir'd by all the Hop-Vines will be equal to an Area of Liquor as broad as an Acre, and $\frac{1}{101}$ Part of an Inch deep, beſides what evaporated from the Earth.

And this Quantity of Moiſture in a kindly State of the Air, if daily carry'd off, is a ſufficient Quantity to keep the *Hops* in an healthy State: But in a rainy moiſt State of Air, without a due Mixture of dry Weather, too much Moiſture hovers about the *Hops*, ſo as to hinder, in ſome meaſure, the kindly Perſpiration of the Leaves, whereby the ſtagnating Sap corrupts, and breeds mouldy Fen, which often ſpoils vaſt Quantities of flouriſhing Hop-grounds.

This was the Caſe in the Year 1723, when for ten or fourteen Days almoſt continual Rains fell, about the latter half of *July*, after four Months dry Weather; upon which the moſt flouriſhing and promiſing *Hops* were all infected with Mould or Fen in their Leaves and Fruit, while the then poor and unpromiſing *Hops* eſcap'd, and produc'd Plenty; becauſe they being ſmall, did not perſpire ſo great a Quantity as others; nor did they confine the perſpired Vapour, ſo much as the large thriving Vines did in their ſhady Thickets.

The Planters obſerve, than when a Mould or Fen has once ſeiz'd any Part of the Ground, it ſoon runs over the Whole, and that the Graſs and other Herbs under the *Hops* are infected with it; probably, becauſe the ſmall Seeds of this quick-growing Mould, which ſoon come to Maturity, are blown over the whole Ground; which ſpreading of the Seed, may be the Reaſon why ſome Grounds are infected with Fen for ſeveral Years ſucceſſively, *viz.* From the Seeds of the laſt Year's Fen. Might it not then be adviſeable, to burn the Fenny *Hop-Vines* as ſoon as the *Hops* are pick'd, in hopes thereby to deſtroy ſome of the Seed of the Mould?

Mr. *Auſten* of *Canterbury* obſerves Fen to be more fatal to thoſe Grounds, that are low and ſhelter'd, than to the high and open Grounds; to thoſe that are ſhelving to the North, than to thoſe ſhelving to the South; to the Middle of Grounds, than to the Outſides; to the dry and gentle Grounds, than to the moiſt and ſtiff Grounds.

This was very apparent throughout the Plantations where the Land had the ſame Workmanſhip and Help beſtow'd upon it, and was wrought at the ſame Time. But if in either of theſe Caſes there was a Difference, it had a different Effect; and the low and gentle Grounds, that lay neglected, were then ſeen leſs diſtemper'd than the open and moiſt which were carefully managed and look'd after.

The Honey-Dews are obſerv'd to come about the 11th of *June*, which by the Middle of *July* turn the Leaves black, and make 'em ſtink.

The ſaid Mr. *Hales* relates, that in the Month of *July* (the Seaſon for *Fire-blaſts*, as the Planters call them) he has ſeen the Vines in the Middle of the *Hop-Ground* ſcorch'd up almoſt from one End of a large Ground to the other, when a hot Gleam of Sun-ſhine has come immediately after a Shower of Rain, at which Time the Vapours are all ſeen with the naked Eye, but eſpecially with reflecting Teleſcopes, to aſcend ſo plentifully as to make a clear and diſtinct Object become immediately very dim and tremulous. Nor was there any dry gravelly Vein in the Ground along the Courſe of this Scorch: It was therefore, probably, owing to the much greater Quantity of ſcorching Vapours in the Middle, than the Outſides of the Ground; and that being a denſer Medium, it was much hotter than a more rare Medium.

And, perhaps, the great Volume of aſcending Vapours might make the Sun-beams converge a little towards the Middle of the Ground; that being a denſer Medium, and thereby increaſe the Heat conſiderably: For he obſerv'd, that the Courſe of the ſcorched *Hops* was in Lines at Right Angles to the Sun-beams about Eleven o'Clock, at which Time the hot Gleam was.

The *Hop-Ground* was in a Valley which ran from South-Weſt to North-Eaſt; and, to the beſt of his Remembrance, there was but little Wind, and that in the Courſe of the Scorch: But had there been ſome other gentle Wind, either North or South, 'tis not improbable but that the North Wind gently blowing the Volume of riſing Wreak on the South-ſide of the Ground, that Side might have been moſt ſcorch'd; and ſo *vice verſa*.

As to particular Fire-blaſts which ſcorch here and there a few *Hop-Vines*, or one or two Branches of a Tree, without damaging the next adjoining; what Aſtronomers obſerve, may hint to us a no very improbable Cauſe of it, *viz.* They frequently obſerve (eſpecially with reflecting Teleſcopes) ſmall ſeparate Portions of pellucid Vapours floating in the Air, which, tho' not viſible to the naked Eye, are yet conſiderably denſer than the circumambient Air: And Vapours of ſuch a Degree of Denſity may very probably either acquire ſuch a ſcalding Heat from the Sun, as will ſcorch what Plants they touch, eſpecially the more tender.

But to return to the Management of *Hops*.

About the Middle of *July* Hops begin to blow, and will be ready to gather about *Bartholomew-tide*: A Judgment may be made of their Ripeneſs, by their ſtrong Scent, their Hardneſs, and the Browniſh Colour of their Seed.

When by theſe Tokens they appear to be ripe, they muſt be pick'd with all the Expedition poſſible; for if at this Time a Storm of Wind ſhould come, it would do them great Damage, by breaking the Branches, and bruiſing and diſcolouring the *Hops*. And it is very well known, that *Hops* being pick'd green and bright, will ſell for a third Part more than thoſe which are diſcoloured and brown.

The moſt convenient way of picking them, is into a long ſquare Frame of Wood call'd a *Binn*, with a Cloth hanging on Tenter-hooks within it, to receive the *Hops* as they are pick'd.

This Frame is compos'd of four Pieces of Wood join'd together, ſupported by four Legs, with a Prop at each End to bear up another long Piece of Wood plac'd at a convenient Height over the Middle of the Binn; this ſerves to lay the Poles upon which are to be pick'd.

This Binn is commonly eight Foot long, and three Foot broad; two Poles may be laid on it at a Time, and ſix or eight Perſons may work at it, three or four on each Side.

It will be beſt to begin to pick the *Hops* on the Eaſt or North-ſide of your Ground, if you can do it conveniently; this will prevent the South-weſt Wind from breaking into the Garden.

Having made choice of a Plot of the Ground containing eleven Hills ſquare, place the Binn upon the Hill which is in the Centre, having five Hills on each Side; and when theſe Hills are pick'd, remove the Binn into another Piece of Ground of the ſame Extent, and ſo proceed till the whole *Hop-Ground* is finiſh'd.

When the Poles are drawn up to be pick'd, you muſt take great Care not to cut the Binds too near the Hills, eſpecially when the *Hops* are green, becauſe it will make the Sap to flow exceſſively.

And if the Poles do not come up without Difficulty, they ſhould be rais'd by a Piece of Wood in the Nature of a Lever, having a forked Piece of Iron with Teeth on the Inſide, faſten'd within two Foot of the End.

The *Hops* muſt be pick'd very clean, *i. e.* free from Leaves and Stalks; and, as there ſhall be occaſion, two or three times in a Day the Binn muſt be emptied into a *Hop-bag* made of coarſe Linen Cloth, and carry'd immediately to the Oaſt or Kiln, in order to be dry'd: For if they ſhould be long in the Binn or Bag, they will be apt to heat, and be diſcolour'd.

If the Weather be hot, there ſhould no more Poles be drawn than can be pick'd in an Hour; and they ſhould be gather'd in fair Weather, if it can be, and when the *Hops* are dry; this will ſave ſome Expence in Firing, and preſerve their Colour better when they are dry'd.

The beſt Method of drying *Hops*, is with Charcoal on an Oaſt or Kiln cover'd with Hair-Cloth, of the ſame Form and Faſhion that is us'd for Drying of *Malt*. There's no need to give any particular Directions for the Making it; ſince every Carpenter or Bricklayer, in thoſe Countries where *Hops* grow, or *Malt* is made, knows how to build them.

The Kiln ought to be ſquare, and may be of ten, twelve, fourteen, or ſixteen Feet over at the Top, where the *Hops* are laid, as your Plantation requires, and your Room will allow. There ought to be a due Proportion between the Height and the Breadth of the Kiln and the Beguels of the Steddle where the Fire is kept; *viz.* If the Kiln be twelve Feet ſquare on the Top, it ought to be nine Feet high from the Fire, and the Steddle ought to be ſix Feet and an half ſquare, and ſo proportionable in other Dimenſions.

The *Hops* muſt be ſpread even upon the Oaſt a Foot thick or more, if the Depth of the Curb will allow it. But Care is to be taken not to over-load the Oaſt, if the *Hops* be green or wet.

The Oaſt ought to be firſt warm'd with a Fire before the *Hops* are laid on; and then an even ſteady Fire muſt be kept under them: It muſt not be too fierce at firſt, leſt it ſcorch the *Hops*; nor muſt it be ſuffer'd to ſink or ſlacken, but rather be increas'd till the *Hops* be nearer dry'd, leſt the Moiſture or Sweat which the Fire has rais'd, fall back or diſcolour them: When they have lain about nine Hours, they muſt be turn'd, and in two or three Hours more they may be taken off the Oaſt. It may be known when they are well dry'd by the Brittleneſs of the Stalks, and the eaſy falling off of the *Hop-Leaves*.

The *Dutch* and *Flemings* have another Method of drying their *Hops*: They make a ſquare Kiln or Room about eight or ten Feet wide, built of Brick or Stone, having a Door at one Side, and a Fire-place in the Middle of the Room, on the Floor, about thirteen Inches wide within, and thirteen Inches high in Length from the Mouth of it almoſt to the Back-part of the Kiln, a Paſſage being left juſt enough for a Man to go round the End of it. This they call a Horſe, ſuch as is commonly made in Malt-kilns, the Fire paſſing out at Holes at each Side, and at the End of it.

The Bed or Floor, on which the *Hops* lie to be dry'd, is plac'd about five Feet high above; about that is a Wall, near four Feet high, to keep the *Hops* from falling.

A Window is made at one Side of the upper Bed, to ſhove off the dry *Hops* down into a Room prepar'd to receive them. The Beds are made of Laths or Rails ſawn very even, lying a quarter of an Inch diſtant from one another, with a Croſs-beam in the Middle to ſupport them; the Laths are let in even with the Top of the Beam, and this keeps them even in their Places. This they call an Oaſt.

The *Hops* are laid on this Bed by Baskets full, without any Oaſt-cloth, beginning at one End, and ſo going on till all is cover'd half a Yard thick, without treading them; then they even them with a Rake, that they may lie of an equal Thickneſs.

This being done, they kindle the Fire below, either of Wood or Charcoal; but the latter is accounted the better Fewel for *Hops*: This Fire is kept as much as may be at an equal or conſtant Heat, and only at the Mouth of the Furnace, for the Air will ſufficiently diſperſe it.

They do not ſtir them till they are throughly dry'd, *i. e.* Till the Top is as fully dry'd as the Bottom; but if they find any Place not to be ſo dry as the reſt (which may be known by reaching over them with a Stick or Wand, and touching them in ſeveral Places) they obſerve where they do not rattle, and where they do; and where they do not rattle, they abate them there, and diſpoſe of them where the Places were firſt dry.

They know when they are throughly dry by the Brittleneſs of the inner Stalk, if it be ſhort when it is rubb'd; which when they find, they take out the Fire, and ſhove out the *Hops* at the Window, that is made for that Purpoſe, into the Room made to receive them, with a Coal-Rake made with a Board at the End of a Pole; and then go in at the Door below, and ſweep up the *Hops* and *Seeds* that fall through, and put them to the other *Hops*; then they lay another Bed of green *Hops*, and renew the Fire, and proceed as before.

This Method is diſapprov'd by ſome, becauſe they ſay, the *Hops* lying ſo thick, and not being turn'd, the under Part of them muſt needs dry before the upper, and the Fire paſſing through the whole Bed to dry the upper-moſt, muſt neceſſarily over-dry and much prejudice the greateſt Part of the *Hops* both in Strength and Weight, beſides the unneceſſary Expence of Firing, which muſt be long continu'd to dry throughly ſo many together.

Therefore ſome have improv'd on this Method, and advis'd to make the Kiln much as is before directed as to the *Dutch* Way.

Firſt, to make a Bed of flat Ledges about an Inch thick, and two or three Inches broad, ſawn and laid acroſs one another, the flat Way Chequerwiſe, at about three or four Inches Diſtance one from the other, the Edges being ſo enter'd one into the other, that the Floor may be even and ſmooth: This Bed may be made to reſt on two or three Joiſts, ſet edge-wiſe, to ſupport it from ſinking.

This Bed is to be cover'd with large double Tin, ſolder'd together at each Joint, and the Ledges muſt be ſo order'd, before they are laid, that the Joints of the Tin may always lie over the Middle of the Ledge, the Bed being wholly cover'd over with Tin, Boards muſt be fitted about the Edges of the Kiln, to keep up the *Hops*; but one Side muſt be made to remove, that the *Hops* may be ſhov'd off as before.

On this Bed or Floor of Tin, the *Hops* may be turn'd without ſuch Hazard or Loſs, as upon the Hair-cloth, and alſo it will require a leſs Expence of Fewel; and beſides, any Sort of Fewel will ſerve in this Kiln as well as Charcoal, becauſe the Smoak does not paſs through the *Hops*, as it does the former Ways: But then Care is to be taken, that there be Paſſages made for it at the ſeveral Corners and Sides of the Kiln.

It is found by Experience, that the turning of *Hops*, though it be after the moſt eaſy and beſt Manner, is not only an Injury and Waſte to the *Hops*, but alſo an Expence of Fewel and Time, becauſe they require as much Fewel, and as long a Time to dry a ſmall Quantity, by turning them, as a large one.

Now this may be prevented, by having a Cover (to be let down and rais'd at Pleaſure) to the upper Bed whereon the *Hops* lie.

This Cover may alſo be tinn'd, by nailing ſingle Tin Plates over the Face of it, ſo that when the *Hops* begin to dry, and are ready to burn, *i. e.* when the greateſt Part of their Moiſture is evaporated, then the Cover may be let down within a Foot or leſs of the *Hops* (like a Reverberatory) and will reflect the Heat upon them, ſo that the Top will ſoon be as dry as the Lowermoſt, and every *Hop* be equally dry'd.

As ſoon as the *Hops* are taken off the Kiln, lay them in a Room for three Weeks or a Month to cool, give, and toughen, for if they are bagged immediately, they will powder; but if they lie a while (and the longer they lie the better, provided they be cover'd cloſe with Blankets to ſecure them from the Air) they may be bagged with more Safety, as not being liable to be broken to Powder in treading, and this will make them bear treading the better, and the harder they are trodden, the better they will keep.

The common Method of Bagging is as follows: They have an Hole made in an upper Floor, either round or ſquare, large enough to receive a Hop-bag (which conſiſts of four Ells and an half of Ell-wide Cloth, and alſo contains ordinarily two hundred and an half of *Hops*;) they tie a Handful of *Hops* in each lower Corner of the Bag, to ſerve as Handles to it; and they faſten the Mouth of the Hole, ſo plac'd, that the Hoop may reſt upon the Edges of the Hole.

Then he that is to tread the *Hops* down into the Bag, treads the *Hops* on every Side, another Perſon continually putting of them in as he treads them, till the Bag is full; which being well fill'd and trodden, they unrip the Faſtening of the Bag to the Hoops and let it down, and cloſe up the Mouth of the Bag, tying up a Handful of *Hops* in each Corner of the Mouth, as was done in the lower Part.

Hops being thus pack'd, if they have been well dry'd, and laid up in a dry Place, they will keep good ſeveral Years; but Care muſt be taken that they be neither deſtroy'd nor ſpoil'd by the Mice making their Neſts in them.

The Crop of *Hops* being thus beſtow'd, you are to provide for another; firſt by taking Care of the Poles againſt another Year, which are beſt to be laid up in a Shed, having firſt ſtripped off the Haulm from them: But if you have not that Conveniency, ſet up three Poles in the Form of a Triangle, or ſix Poles (as you pleaſe) wide at Bottom; and having ſet them into the Ground, with an Iron Pitcher, and bound them together at Top, ſet the reſt of your Poles about them: And being thus diſpos'd, none but thoſe on the Outſide will be ſubject to the Injuries of the Weather, for all the inner Poles will be kept dry, unleſs at the Top, whereas if they were on the Ground, they would receive more Damage in a Fortnight, than by their ſtanding all the reſt of the Year.

In the Winter-time, provide your Soil and Manure for the *Hop-ground* againſt the following Spring.

If the Dung be rotten, mix it with two or three Parts of common Earth, and let it incorporate together till you have occaſion to make uſe of it in making your *Hop-hills*; but if it be new Dung, then let it be mix'd as before, till the Spring come twelve Months, for new Dung is very injurious to *Hops*.

Dung of all Sorts was formerly more commonly made uſe of than now it is, eſpecially when rotted and turn'd to Mould; and they who have no other Manure muſt uſe it: Which if they do, Cows or Hogs Dung, or human Ordure mix'd with Mud may be a proper

Compoſt, becauſe *Hops* delight moſt in a Manure that is cool and moiſt.

Some recommend Chalk or Lime as the beſt Manure, except in cold Lands, and in ſuch, Pigeons Dung will do beſt; a little of which laid to a Hill, and ſo mix'd that it may not be too hot in a Place, is of great Advantage.

LUTEOLA; Weld, Would, Yellow-weed, *or* Dyers-weed.

The *Characters* are;

The Leaves are oblong and intire; it hath an anomalous Flower, conſiſting of many diſſimilar Leaves; the Fruit is globular, hollow, and divided into three Parts.

The *Species* are;

1. LUTEOLA; *herba, Salicis folio. C. B. P.* Common Weld.

2. LUTEOLA; *minima Polygalæ folio. D. du Bois. Raii Syn.* Smalleſt Weld, with a Milk-wort Leaf.

The firſt of theſe Plants is very common in *England*, growing upon dry Banks and the Tops of Walls and Buildings almoſt every where; but the ſecond Sort is very rare: This was found near *Tunbridge-Wells* by *Charles du Bois*, Eſq; ſeveral Years ſince.

The common *Weld* is accounted a rich Dyer's Commodity, and is of great Advantage, conſidering the ſmall Expence of its Culture: It will grow upon the pooreſt Sort of Land, provided it be dry, though upon a middling Soil it will grow much larger. The Seeds of this Plant ſhould be ſown the Beginning of *Auguſt*, ſoon after ripe; when it will come up with the firſt moiſt Weather, and will grow very ſtrong the ſame *Autumn*, provided it be ſown by itſelf, for moſt People ſow it with Corn, which is very wrong, for that hinders its Progreſs greatly, and occaſions the Loſs of one whole Year. When the Plants are come up pretty ſtrong, you ſhould hoe them (as is practis'd with *Turnips*) in order to deſtroy the Weeds, as alſo to cut up the Plants where they grow too thick, which will greatly improve them; and the ſucceeding *Spring*, if the Ground produces many Weeds, you ſhould give it a ſecond Hoeing in *April*, which will preſerve it clean from Weeds; for after that the *Weld* will grow, and prevent the Weeds from coming to a Head afterwards.

You muſt be very cautious in the Gathering of it, that the Seed be not over-ripe, ſo as to fall out, and that neither the Stalk or Seed be under-ripe; becauſe if it be, both will be ſpoil'd. It muſt be pull'd up and bound in little Handfuls, and ſet to dry, as you do *Flax*, and then houſe it carefully, that you ſhake not out the Seed, which is eaſily beat out, and ſhould be ſown (as was before directed) ſoon after it is ripe.

This Seed is commonly ſold for about Ten Shillings *per* Buſhel, or more; a Gallon of which will ſow an Acre, for it is very ſmall.

There are ſome who recommend the ſowing this Seed in the *Spring*, mixing it with a Crop of *Barley* or *Oats*, and only harrow'd in with a Buſh, or rolled with a Roller. But this is not a good Method; for the *Barley* or *Oats* will ſtarve the *Weld*, and make it very poor: And, many times, the Seeds which are ſown in the *Spring*, do not grow, or not come up, till the *Autumn* following; whereas that ſown in the Beginning of *Auguſt*, rarely fails to come up ſoon after; and will be much ſtronger, and fit to pull the ſucceeding *Summer*, when the other is always two Years before it is pull'd. The *Dyers* uſe it for dying of bright Yellows and Lemon Colours. 'Tis much ſown in *Kent*, eſpecially about *Canterbury*, and often yields from forty Shillings, to ten or twelve Pounds an Acre.

LYCHNIS; Campion.

The *Characters* are;

The Leaves are whole, and grow oppoſite by Pairs upon the Stalks: The Cup of the Flower is whole, and either tubulous or ſwelling, and for the moſt Part furrow'd: The Flower conſiſts of five Leaves, which expand in Form of a Clove-Gilly-flower, *and are generally Heart-ſhap'd: The Ovary, which riſes in the Centre of the Calix, becomes a conical Fruit, which is wrapt up in the Flower-Cup, and has commonly one Cell, which is fill'd with Seeds, which are roundiſh, angular, and Kidney-ſhap'd.*

The *Species* are;

1. Lychnis; *coronaria, Dioſcoridis, ſativa, flore dilutè rubentè. C. B. P.* Garden or Roſe Campion, with a pale-red Flower.

2. Lychnis; *coronaria, Dioſcoridis, ſativa, flore rubro, velut flammeo fulgens. C. B. P.* Roſe Campion, with a flaming red colour'd Flower.

3. Lychnis; *coronaria*; *ſativa multiplex. C. B. P.* The Double Roſe Campion.

4. Lychnis; *coronaria, ſativa, Dioſcoridis, flore albo. C. B. P.* The Single White Roſe Campion.

5. Lychnis; *umbellifera, montana, Helvetica. Zan.* Umbelliferous Mountain Campion of Helvetia.

6. Lychnis; *alba, multiplex. C. B. P.* Double White Campion, *commonly call'd* The Double Batchelor's Button.

7. Lychnis; *purpurea, multiplex. C. B. P.* Double Red Campion, *commonly call'd* The Double Red Batchelor's Button.

8. Lychnis; *pratenſis, flore laciniato, pleno. Mor. Hiſt.* The Double Meadow Campion, with a jagged Flower, *commonly call'd* The Double Ragged Robin.

9. Lychnis; *hirſuta, flore coccineo major. C. B. P.* The Scarlet *Lychnis*, Nonſuch, Jeruſalem Croſs, *or* Flower of Conſtantinople.

10. Lychnis; *hirſuta, flore incarnato, major. C. B. P.* Great Hairy Campion, with a Fleſh-colour'd Flower, *commonly call'd* The Pale *Lychnis* of Conſtantinople.

11. Lychnis; *Chalcedonica, flore pleno miniato, ſeu aurantiaco. Mor. Hiſt.* The Double Scarlet *Lychnis*; or Flower of Conſtantinople.

12. Lychnis; *ſeu ſaponaria, flore pleno. Tourn.* Double Soap-wort; *vulgò.*

13. Lychnis; *ſylveſtris, quæ Beën album, vulgò. C. B. P.* Wild Campion Spatling Poppy, or white Behen of the Shops.

14. Lychnis; *ſylveſtris, viſcoſa, anguſtifolia rubra. C. B. P.* Red German Catchfly.

15. Lychnis; *ſylveſtris, viſcoſa, anguſtifolia rubra, flore pleno.* Red German Catchfly, with a Double Flower.

16. Lychnis; *Orientalis, buplenri folio. T. Cor.* Eaſtern Campion, with a Hare's-ear Leaf.

17. Lychnis; *facie auricula urſi. C. B. P.* Campion, with the Face of an Auricula.

18. Lychnis; *maritima, ſaxatalis, folio anacampſerotis. T. Cor.* Maritime Rocky Campion, with an Orpine Leaf.

19. Lychnis; *noctiflora, anguſtifolia, odorata. Tourn.* Night-flower'd ſweet-ſcented Campion, with a narrow Leaf.

20. Lychnis; *fruteſcens, myrtifolia, Beën albo ſimilis. C. B. P.* Shrubby Myrtle leav'd Campion, like the White Behen.

21. Lychnis; *ſegetum, rubra, foliis perfoliata. C. B. P.* Red Corn-Campion, with thorough-wax Leaves.

22. Lychnis; *ſupina, Sicula, calice ampliſſimo, ſtriato. Tourn.* Low Sicilian Campion, with a large ſtreak'd Flower-cup.

23. Lychnis; *ſylveſtris, viſcoſa, anguſtifolia rubra, altera. C. B. P.* Another narrow-leav'd wild Campion, with a viſcous Stalk, and red Flowers.

24. Lychnis; *viſcoſa, purpurea, latifolia lævis. C. B. P.* Purple viſcous Campion, with a broad ſmooth Leaf, *commonly call'd* Lobel's Catch-fly.

25. Lychnis; *viſcoſa, alba, latifolia lævis. C. B. P.* White flowering broad-leav'd Catch-fly.

26. Lychnis; *hirſuta, minor, flore variegato. Tourn.* Small hairy Campion, with a variegated Flower, *commonly call'd* Dwarf *Lychnis.*

27. Lychnis; *Hiſpanica, folio Kali, multiflora. Tourn.* Spaniſh Many-flower'd Campion, with a Glaſs-wort Leaf.

28. Lychnis; *Hiſpanica, Valerianæ rubræ folio, purpuraſcente flore. Tourn.* Spaniſh Campion, with a red Valerian Leaf, and a purpliſh Flower.

29. Lychnis; *ſegetum, meridionalium, annua, hirſuta, floribus rubris, uno verſu diſpoſitis, Mor. Hiſt.* Corn annual hairy Campion, with red Flowers diſpos'd on one Side of the Stalk.

30. Lychnis; *ſylveſtris, alba, ſpicâ reflexâ. Bot. Monſp.* White wild Campion, with a reflex'd Spike.

The firſt, ſecond, and fourth Sorts are very common in moſt *Engliſh* Gardens: Theſe are very hardy Plants, and eaſily propagated either by parting of their Roots, or from Seed; if by parting the Roots, it ſhould be done about the Latter-end of *Auguſt*, or the Beginning of *September*, that they may take Root before the cold Weather comes on: They may be planted in any Situation, provided they have a light dry Soil. If you would propagate them from Seeds, they ſhould be ſown in *March* upon a Bed of freſh light Earth; and in *May* the Plants ſhould be tranſplanted into another Bed of the like freſh Earth, at about ſix Inches Diſtance from each other; obſerving to water and ſhade 'em until they have taken Root; after which, they will require no farther Culture than to keep them clear from Weeds.

At *Michaelmas* following theſe Plants may be placed into the large Borders of the *Pleaſure-Garden*, where, the Summer following, they will produce their Flowers in *June* and *July*; and ſoon after their Seeds will ripen, which, if permitted to ſhed on the Ground, will riſe in the ſucceeding Spring, without any Care.

Theſe Plants, when intermix'd with others of the like Size, do make an agreeable Variety during the Seaſon of Flowering.

The *Double Roſe Campion* is ſomewhat nicer, and requires more Care in its Culture than any of the former: This never produces any Seeds, and is therefore only to be propagated by parting the Roots; the beſt Time for which is in *Auguſt*, when the Heads taken off ſhould be planted on a Bed of light freſh

Earth; and if the Seaſon ſhould prove dry, they muſt be water'd and ſhaded until they have taken Root: After which, they muſt be kept clear from Weeds; and, during the Winter-ſeaſon, they ſhould be skreen'd from exceſſive Rains; for too much Moiſture at that Seaſon, very often rots them. In *March* they may be taken up with a Ball of Earth to their Roots, and tranſplanted either into the Borders of the *Flower-Garden*, or in Pots fill'd with light freſh Earth, and plac'd where they may have the Morning Sun 'till Eleven o' Clock, in which Situation they will thrive better than when they have more of the Sun. In dry Weather they muſt be frequently watered: but you ſhould never let them have too much Wet, for that will canker and rot 'em, as will alſo a very rich Soil. This Plant commonly grows about two Feet high, and produces a great Number of beautiful red Flowers in *June* and *July*, which continue a long Time, for which they are greatly eſteem'd.

The *Umbelliferous Mountain Campion* is nearly akin to the before-mention'd Sorts, but produces its Flowers in an Umbel upon the Top of the Stalks which are of a bright red Colour, and make a very pretty Variety in a Garden: This ſeldom grows above eight or nine Inches high, therefore it ſhould be placed amongſt Flowers of the ſame Growth; it delights in a light freſh undung'd Soil, and ſhady Situation, and may be propagated either from Seeds, which it commonly affords in great Plenty, or from Slips, as the before-mention'd Sorts.

The *Red* and *White Batchelor's Button* are very hardy Plants, in reſpect to Cold: but if they are ſuffer'd to remain long in a Place unremov'd, they are very ſubject to rot and decay. They never produce Seeds, ſo are propagated only by parting of their Roots, which may be done either in *September*, or in the Beginning of *March*: but the former Seaſon is preferable; for they will then be well rooted in the Ground before the dry Weather of the *Spring* comes on, whereby they will be out of Danger from that; whereas thoſe planted in the *Spring*, if the Weather ſhould prove dry ſoon after, will ſtarve, and be very weak, unleſs frequently water'd: Theſe commonly grow above two Feet high, and produce their Flowers in *June* and *July*: They love a freſh loamy Soil, which ſhould not be dung'd, and to have a Situation to the Morning Sun, in which they will thrive better than in a more open Expoſure.

The *Double Ragged Robin* is alſo increas'd by parting the Roots in *Autumn*: This Plant muſt have a moiſt Soil, and ſhady Situation, where it will thrive exceedingly: but in a hot dry Soil it ſeldom does well: It produces its Flowers about the ſame Time as the former, and is very proper for ſhady cold Borders, where few other Plants will thrive.

The *Single Scarlet Lychnis* may be either propagated by ſowing the Seeds, or parting the Roots: If from Seeds, it ſhould be ſown on a Bed of light Earth in the Beginning of *March*; and when the Plants are come up pretty ſtrong (which is commonly in *May*) they ſhould be tranſplanted out into Nurſery-beds at about ſix Inches Diſtance each way, obſerving to water and ſhade them until they have taken Root; after which they will require no farther Care but only to keep them clear from Weeds until *Michaelmas*; at which time they may be remov'd into the Borders of the Flower-Garden, where the next Summer they will produce very ſtrong Stems of Flowers: but if you would propagate them by parting the Roots, it ſhould be done in *September* (as was directed for the fore-mention'd Sorts). This Plant will grow in almoſt any Soil or Situation, but does beſt in a middling, loamy Soil, and an open Expoſure.

The *Double Lychnis*, or *Nonſuch*, is only propagated by parting the Roots, or planting the Cuttings of its Flower-ſtems, which, if water'd and ſhaded, will take Root very well, and make good Plants. The beſt Seaſon for parting the Roots is in *September*: but for planting the Cuttings, *July* is the moſt proper Seaſon; in doing of this, you ſhould take only the lower Parts of the Flower-ſtems, which generally ſucceed much better than the extreme Parts: The Cuttings ſhould have three Joints, two of which ſhould be placed in the Ground, and the third only left above-ground, from which the Shoot will be produc'd and make a good Plant; by which Method this beautiful Flower may be propagated much faſter than from the Root alone.

This Plant delights in a freſh light Soil, which is not too dry, where it will produce very ſtrong Stems, and riſe about three Feet high. This flowers in *July*, and if the Seaſon does not prove very hot, will continue in Beauty a whole Month, for which it is greatly eſteem'd.

The *Double Sopewort* is a Plant of no great Beauty; and being a very great Runner in Gardens, has been almoſt excluded from all curious Gardens: but as it is a Plant which requires very little Culture, ſo it may be admitted to have a Place in ſome abject Part of the Garden. This is propagated by its running Roots, which ſhould be tranſplanted in *October*, and may be plac'd in any Soil and Situation, but ſhould never ſtand near any other Plants, for it will over-run and deſtroy them. It may be planted under Trees in large Avenues, &c. where it will thrive very well, and in *Auguſt* will produce large Bunches of double Flowers, which are very proper to place in Chimneys, &c. or in Baſons among other Flowers, where it will make a fine Appearance; and were it leſs common, it would be more eſteem'd than it is at preſent.

The *Spattling Poppy*, or *White Behen*, is a very common Plant in the Fields in moſt Parts of *England*, and is rarely cultivated in Gardens; but thoſe who have a mind to preſerve it for Medicinal Uſes, may propagate it by ſowing the Seeds in *March* on a Bed of common Earth, where the Plants will eaſily riſe, and if kept clear from Weeds will ſoon overſpread the Ground, and will continue for ſeveral Years.

The *Red German Catchflies*, both ſingle and double, are eaſily propagated by parting the Roots, which ſhould be done in Autumn, for if it be perform'd in the Spring, the dry Weather, which uſually happens at that Seaſon, greatly retards their Growth, whereby their Flowers are never ſo ſtrong, nor produc'd in ſuch Plenty as when they are remov'd in Autumn. Theſe produce their Flowers in Spikes upon clammy Stalks, which grow about a Foot high, and flower in *April* and *May*: That with ſingle

Flowers always is the earlieſt, but the double Sort continues longeſt in Flower.

The ſingle Sort may be propagated by Seeds, which ſhould be ſown in *March*, upon a Bed of light Earth; and when the Plants come up, they ſhould be tranſplanted into Nurſery-beds about ſix Inches aſunder, where they will require no farther Care than to keep them clear from Weeds, and in very dry Weather to give them a little Water, and at *Michaelmas* they may be remov'd where they are deſign'd to remain.

The ſingle flower'd Sort is not near ſo beautiful as the Double, and therefore hardly worth propagating, ſince the Double is very eaſily multiply'd; eſpecially if planted in a moiſt, light Soil, in which it will thrive exceedingly, and produce ſtrong Flowers. This Sort is very proper to plant in Pots, to adorn ſmall Court-Yards at the Time of its Flowering.

The ſixteenth and nineteenth Sorts are pretty Varieties in a Garden; and as they take up but little Room, and are not very nice in their Culture, they may have a Place amongſt other Flowers of the ſame Growth. Theſe are propagated by ſowing their Seeds in *March*, upon a Bed of light, freſh Earth; and when the Plants are come up, they ſhould be tranſplanted into a Nurſery-bed, as the former, and at *Michaelmas* may be remov'd into the Borders of the Flower-Garden, where they are to remain. Theſe Plants commonly grow about two Feet high; but as their Leaves are narrow, and the Flower-ſtems ſtand erect, ſo they take up very little Room, and their Roots will continue ſeveral Years, and annually produce large Quantities of Flowers: Theſe delight in a freſh light dry Soil.

The ſeventeenth is a biennial Plant; and is only propagated by Seeds, which ſhould be ſown on a Border of freſh light Earth in *March*; and when the Plants are come up, they ſhould be tranſplanted: ſome of which ſhould be planted in Pots fill'd with the ſame freſh Earth, that they may be remov'd under Shelter in Winter: for it often happens, in ſevere Winters, that thoſe Plants which are plac'd in the open Air are deſtroy'd; for which Reaſon it is adviſeable to have ſome of the Plants in Shelter to ſecure the Kind.

The other Plants may be planted in a Nurſery-bed, as was directed for the former Kinds, where they may remain until *Michaelmas*; at which Time they ſhould be tranſplanted into warm Borders, and in a light dry Soil, where they will endure the Cold of our ordinary Winters very well, and flower very ſtrong the ſucceeding Summer. This Plant commonly grows three Feet high, and is apt to branch out pretty much, therefore ſhould be ſupported by Stakes, otherwiſe the Wind often breaks down the Flower-ſtems before the Seeds are perfected.

The eighteenth Sort is alſo tender: This may be propagated by ſowing the Seeds in the ſame manner as the former; and when the Plants come up, ſome of them ſhould be planted into Pots fill'd with light freſh undung'd Earth, that they may be ſhelter'd in Winter; and the reſt planted into a Nurſery-bed, which ſhould be prepar'd of freſh light Earth that has not been dung'd; for Moiſture and Richneſs in the Soil will deſtroy them: In this Place they may remain till *Michaelmas*, when they ſhould be remov'd into very warm Borders; and if they are plac'd quite cloſe to the Wall, where it is commonly very dry, they will ſucceed the better; as alſo planted on a dry rubbiſhy Soil, for the Leaves of this Plant are very thick and ſucculent, as are all the Stems, ſo that it is as impatient of Wet as the *Sedum* or *Houſeleek*; and I do not certainly know whether this Plant would not bear a greater Share of Cold, if it was planted upon an old Wall or Building, where it might be always dry, and not have too much Nouriſhment from the Ground. The following Summer this Plant will produce its Flowers, (which though they are not very beautiful, yet for the Oddneſs of the Plant it may have a Place in a good Garden) and the Seeds generally ripen in *Auguſt*: It may alſo be propagated by planting Cuttings in any of the Summer Months, which will take Root, and may be afterwards manag'd as the Seedling-Plants.

The *Myrtle-leav'd, ſhrubby Campion* may be propagated by Seeds as the former, or increas'd by planting Cuttings in any of the Summer Months, which will ſoon after take root, and become ſtrong Plants; ſome of which ſhould be planted in Pots, that they may be ſhelter'd in Winter for fear of being loſt, tho' they will endure the Cold of our Climate very well, if planted on a dry Soil. There is no great Beauty in this Plant, but it is preſerv'd for Variety Sake in ſeveral curious Gardens.

The twenty-ſeventh and twenty-eighth Sorts are abiding Plants, and may be propagated either by Seeds or parting their Roots, in the Manner which has been directed for the *Roſe Campion*, and other Sorts before-mention'd: They are very hardy, and will grow upon almoſt any Soil or Situation: They produce their Flowers in *June* and *July*, and their Seeds ripen ſoon after.

The other Sorts are all of them annual Plants, which may be eaſily propagated by ſowing their Seeds either in *March* or *Auguſt*, when the Plants will ſoon come up, and may be tranſplanted, while young, into the Places where they are deſign'd to remain; or the Seeds may be ſcatter'd in Patches upon the large Borders of the Flower-Garden; and when the Plants are come up, they may be thin'd, leaving ſome of the ſtrongeſt to flower in the ſame Places, and the other Plants may be remov'd into other Parts of the Garden.

Thoſe Plants which come up in Autumn will be much larger, and flower earlier and ſtronger than thoſe ſown in the Spring, and will produce good Seeds; whereas it ſometimes happens, in bad Seaſons, that thoſe ſown in the Spring do often decay before their Seeds are perfected, tho' it is a good Method to ſow at both Seaſons, becauſe hereby there will be a Succeſſion of their Flowers, and two Chances for good Seeds.

The *Dwarf Lychnis* has been by ſome recommended to be ſown for Edgings in large Gardens, but I think it by no means proper for that Purpoſe; for when the Plants grow very cloſe together, they draw up weak, ſo that in hard Rains they are beaten down flat to the Ground, and the Flowers ſeldom continue long in Beauty, ſo that it does not afford any Pleaſure above a Fortnight or three Weeks at moſt, after which it appears very unſightly, for when it is in Seed, the Weight of that forces it down upon the Ground; but when the Plants grow ſingly, they will be much larger and ſtronger, and continue longer in Flower.

The two Sorts of *Lobel*'s *Catchfly* have been long cultivated in Gardens, and the Seeds are commonly ſold at the Seed-ſhops in *London*: Theſe grow upright to the Height of ſixteen or eighteen Inches, (if ſown in the Autumn, but thoſe which are ſown in the Spring ſeldom grow ſo large) and produce pretty Tufts of Flowers upon the Tops of the Branches in Form of an Umbel, which continue a long Time in Perfection, and are pretty Ornaments in a large Garden.

The twenty-ſecond Sort ſpreads upon the Ground, and therefore muſt be allow'd more Room than the former. Theſe Plants ſhould be planted two Feet aſunder, otherwiſe they will run into each other, (eſpecially ſuch as are ſown in the Autumn) ſo that in wet Weather they are ſubject to rot and decay. This produces a great Number of beautiful red Flowers, which make a very agreeable Appearance during their Seaſon of Flowering.

There are a great Number of Sorts more than I have here mention'd, which are preſerv'd in curious Botanick Gardens for Variety Sake; but as moſt of them are Plants of little Beauty, ſo I thought it needleſs to enumerate them in this Place, ſince thoſe here mention'd are the beſt worth propagating in a Flower-Garden.

But before I quit this Article, I ſhall beg Leave to add two Plants to this Genus by way of Appendix, tho', according to their Characters, they do not, in Strictneſs, belong to it, differing in their Flowers from the *Lychnis*'s, which have their Flowers cut to the Bottom into five Parts; whereas the Flowers of theſe Kinds are intire, conſiſting of one Leaf: Which Diſtinction being not very great, the modern Botaniſts have thought proper to diſtinguiſh them by the Name of *Lychnidea*, which ſignifies ſomething like a *Lychnis*. Of this Genus we have, at preſent, but two Species which are common in *England*, viz.

1. LYCHNIDEA; *Virginiana. Holoſtei ampliore folio, floribus umbellatis purpureis. Rand.* Virginian *Lychnidea*, with a broad Stitchwort Leaf and Purple Flowers growing in an Umbel.

2. LYCHNIDEA; *Caroliniana floribus quaſi umbellatim diſpoſitis, foliis lucidis, craſſis, acutis. Martyn. Hiſt. Plant. Rar.* Carolina *Lychnidea*, with Flowers growing almoſt in an Umbel, and thick, ſhining, ſharp-pointed Leaves.

Theſe two Plants are propagated either by Cuttings, or parting of their Roots, for they do not produce Seed in this Country. The beſt Time to part their Roots is in the Beginning of *April*, juſt before they begin to ſhoot; when you ſhould take up the Roots, and after having pared off the outer Part of the Ball of Earth, ſo as to ſee where the Heads divide diſtinctly, you muſt with a Knife ſeperate them, ſo as to preſerve ſome Buds upon the Top of each Diviſion; then you may plant them either into Borders of freſh Earth, or Pots fill'd with good freſh loamy Earth, obſerving to water them, if the Seaſon ſhould prove dry, until they have taken Root; after which, thoſe in the Borders will require no farther Care, but only to clear them from Weeds, and when the Flower-ſtems advance, to ſupport them with Sticks; but thoſe in the Pots muſt be frequently water'd in dry Weather, otherwiſe they will ſoon decay.

The firſt of theſe Plants produces its Flowers in *May*; but the ſecond ſeldom flowers till the Middle of *June*, ſo that they ſucceed each other: During their Seaſon of flowering, they make a very handſome Appearance, and are very proper to cut for Baſons or Flower-Pots to adorn Chimnies and Halls at that Seaſon: But the ſecond Sort is a much fairer Plant than the firſt: The Stems of this Sort riſe higher, and are ſtronger; the Flowers are larger, and of a deeper Colour; but it is not quite ſo hardy as the firſt, which will endure the ſevereſt Cold of our Climate in the open Air, whereas this muſt be ſhelter'd in hard Winters, otherwiſe it will be in Danger of ſuffering by the Cold, tho' in our common Winters it will endure abroad very well.

Theſe Plants may alſo be propagated by Cuttings, which ſhould be taken from the old Plants in *May* or *June*, and planted on a Border of freſh light Earth, obſerving to water and ſhade them, until they have taken Root; after which, you muſt obſerve to keep them clear from Weeds, and in very dry Weather repeat watering them as often as they ſhall want it; and when they have obtain'd ſufficient Strength to remove, they may be tranſplanted either into Pots or Borders, where they are to remain. By this Method you may greatly increaſe theſe Plants, which will ſupply the Defect of Seeds.

LYCOPERSICON; Love-Apples.

The *Characters* are;

It hath a Flower conſiſting of one Leaf, which expands in a circular Order, as doth that of the Nightſhade; *the Style afterwards becomes a roundiſh, ſoft, fleſhy Fruit, which is divided into ſeveral Cells, wherein are contain'd many flat Seeds.*

The *Species* are;

1. LYCOPERSICON; *Galeni. Ang.* Yellow Love-Apple.

2. LYCOPERSICON; *Galeni, fructu rubro. Boerh. Ind.* Love-Apple, with a Red Fruit.

3. LYCOPERSICON; *fructu Ceraſi luteo. Tourn.* Love-Apple, with a Red Cherry-ſhap'd Fruit.

4. LYCOPERSICON; *fructu Ceraſi luteo. Tourn.* Love-Apple, with a yellow Cherry-ſhap'd Fruit.

5. LYCOPERSICON; *fructu ſtriato, duro. Tourn.* Love-Apple, with a hard channell'd Fruit.

There are ſome Varieties of theſe Plants in the Gardens of *Italy* and *Spain*, but thoſe here mention'd are all the Sorts I have obſerv'd in the *Engliſh* Gardens.

Theſe Plants are propagated by ſowing their Seeds on a moderate Hot-bed in *March*; and when come up, they ſhould be tranſplanted into another moderate Hot-bed, at about three Inches Diſtance from each other, obſerving to ſhade them until they have taken Root; after which they muſt have frequent Waterings, and a large Share of freſh Air, for if they are too much drawn while young, they ſeldom do well afterwards.

In *May* theſe Plants ſhould be tranſplanted, either into Pots fill'd with rich light Earth, or into the Borders of the Flower-Garden, obſerving to water and ſhade them until they have taken Root; and as the Branches are extended, they ſhould be ſupported with Sticks;

otherwiſe when the Fruit begins to grow, it will preſs them down, and break them.

Thoſe Plants which are plac'd in Pots, ſhould be often water'd, otherwiſe they will come to little, (for they are very droughty Plants) but when they are planted in a rich moiſt Soil, they will grow to a prodigious Size, and produce large Quantities of Fruit; which in Autumn, when they are ripe, make an odd Figure, but the Plants emit ſo ſtrong an Effluvia, as renders them unfit to ſtand near a Habitation, or any Place that is much frequented; for upon their being bruſh'd by the Cloaths, they ſend forth a very ſtrong diſagreeable Scent.

The *Italians* and *Spaniards* eat theſe Apples, as we do Cucumbers, with Pepper, Oil and Salt, and ſome eat them ſtew'd in Sauces, *&c.* but conſidering their great Moiſture and Coldneſs, the Nouriſhment they afford muſt be bad. The firſt of theſe Plants is the Sort directed for Medicinal Uſe, by the *College* in their *Diſpenſatory*.

LYCOPUS; Water-horehound.

This Plant grows in great Plenty on moiſt Soils by the Sides of Ditches in moſt Parts of *England*, but is never cultivated in Gardens, ſo that it would be needleſs to ſay any thing more of it in this Place.

LYSIMACHIA; Loſe-ſtrife.

The *Characters* are;

The Leaves (which are intire and oblong) are produc'd ſometimes by Pairs, or three or four at each Joint of the Stalk; the Flower conſiſts of one Leaf, which expands in a circular Order, and is cut into ſeveral Segments at the Top; the Fruit is globular, and opens at the Top, incloſing many Seeds fix'd to the Placenta.

The *Species* are;

1. LYSIMACHIA; *lutea, major, qua Dioſcoridis. C. B. P.* Common yellow Loſe-ſtrife *or* Willow-herb.

2. LYSIMACHIA; *lutea, major, qua Dioſcoridis, foliis quaternis. C. B. P.* Greater yellow Loſe-ſtrife *or* Willow-herb, with four Leaves at each Joint.

3. LYSIMACHIA; *bifolia, flore luteo globoſo. C. B. P.* Loſe-ſtrife, with two Leaves growing at each Joint, and yellow Flowers growing in round Heads.

4. LYSIMACHIA; *Orientalis anguſtifolio, flore purpureo. F. Cor.* Narrow-leav'd Eaſtern Loſe-ſtrife, with a purple Flower.

5. LYSIMACHIA; *Hiſpanica, ſpicata, flore purpureo. Jeſſ.* Spaniſh Loſe-ſtrife, with purple Flowers growing in Spikes.

The firſt of theſe Plants is pretty common by Ditch-ſides in many Parts of *England*, and is ſeldom cultivated in Gardens, tho' it is not a very deſpicable Plant, for it produces large Spikes of fine yellow Flowers in *July*; for which Reaſon it may be admitted into a cold wet Part of the Garden, where few others will thrive, whereby many a Spot of Ground may be render'd agreeable, which often produces little but groſs Weeds. This Plant may be taken up in the Spring, from the native Places of its Growth, and tranſplanted where you intend it ſhould grow, and it will ſoon increaſe, by its creeping Roots, to what Quantity you pleaſe. This Plant is order'd in the *College Diſpenſatory* for Medicinal Uſe.

The ſecond Sort is not a Native of our Country, but when tranſplanted hither thrives equally with the former: This loves a moiſt rich Soil, and for Variety may be admitted into a Garden.

The third Sort is found in the North of *England* in great Plenty. This Plant is not very proper for a Garden, for the Roots ſpreading very far under-ground, will over-run whatever Plants ſtand near it; nor are the Flowers of any Beauty.

The fourth Sort is a biennial Plant, which produces fine Spikes of ſmall purple Flowers in *June*, and the Seeds are ripe in *Auguſt*.

This Plant may be propagated by ſowing the Seeds ſoon after they are ripe (for if they are kept until the Spring, they ſeldom grow) upon a warm Border of light Earth; and when the Plants are come up, they ſhould be tranſplanted into a Border of ſtrong Earth, where they may have the Morning Sun; in which Place they ſhould remain to flower, for it is a Plant that does not care to be often remov'd.

The fifth Sort is an abiding Plant, which may be propagated by parting its Roots. The beſt Seaſon for this Work is at *Michaelmas*, when the Leaves begin to decay: It ſhould be planted in a moiſt Soil and a ſhady Situation, or muſt be often water'd, otherwiſe it will not produce Flowers: It may alſo be propagated by ſowing the Seeds in the ſame manner as the former; but thoſe Plants which riſe from Seeds ſeldom flower until the ſecond Year, whereas thoſe propagated from Off-ſets will flower the ſucceeding Year. Theſe produce their Flowers in *July*, and their Seeds ripen in *September*.

LYSIMACHIA GALERICULATA; *vide* Caſſida.

LYSIMACHIA NON PAPPOSA; *vide* Onagra.

LYSIMACHIA SILIQUOSA; *vide* Chamænerion.

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MACALEB; *vide* Ceraſus.

MADDER; *vide* Rubia Tinctorum.

MAGNOLIA. The Laurel-leav'd Tulip-Tree, *vulgò*.

The *Characters* are;

It hath a roſaceous Flower, conſiſting of ſeveral Leaves which are placed in a circular Order, from out of whoſe Cup ariſes the Pointal, which afterwards becomes a hard conical Fruit with many Tubers or Riſings, in each of which is contained one hard Nut, which, when emitted, hangs by a long String.

The *Species* are;

1. MAGNOLIA; *Laurifolio ſubtus albicante. Cateſb.* The leſſer Laurel-leav'd Tulip-Tree, *or* ſweet flowering Bay.

2. MAGNOLIA; *ampliſſimo flore albo, fructu cæruleo. Plum.* N. G. The larger Laurel-leav'd Tulip-Tree, with large white Flowers, *commonly called*, the Carolina Laurel.

The firſt of theſe Plants is common in *Virginia* and *Carolina*, where it uſually riſes to the Height of fifteen or ſixteen Feet; but in *England* it is very rare at preſent. The largeſt Plant of this Kind which I have obſerved in *England*, is in the Garden of Mr. *Peter Colinſon*, at *Peckham* in *Surry*, which, altho' not above five Feet high, hath produc'd Flowers for ſeveral Years paſt. The Wood of this Tree is white and ſpongy, covered over with a white Bark; the Leaves are in ſhape like thoſe of the common *Bay*, of a pale, green Colour, and white on their Backſides. In *May* they begin to produce their Flowers, which are white and very fragrant; theſe are continued two Months or more, during which time the Woods are perfumed with their Odour. When the Petals of the Flowers are decay'd, the Pointal becomes a Conical Fruit, about the Size of a large Wallnut, thick ſet with Knobs or Riſings, from each of which, when the Fruit is ripe, are diſcharged flat Seeds, of the Size of Kidney-Beans, having a Kernel within a thin Shell, covered with a Red Skin. Theſe red Seeds, when diſcharged from their Cells, fall not to the Ground, but are ſupported by ſmall white Threads of about two Inches in length, which make a very beautiful Appearance. The Fruit is at firſt Green; when ripe, Red, and when declining turns Brown. This Tree grows naturally in moiſt Places, and often in ſhallow Water, and what is very extraordinary, they being remov'd on high dry Ground, become more regular and handſome, and are more prolifick of Flowers and Fruit. They uſually loſe their Leaves in Winter, unleſs it be very moderate.

The ſecond Sort is eſteemed the moſt beautiful Tree in *America*, where they uſually grow in moiſt ſwampy Woods, and do often riſe to the Height of ſixty or ſeventy Feet; the Leaves are much larger than thoſe of our common Laurel, and are of a bright green Colour; the Flowers are very large, of a white Colour, and very fragrant. The Fruit is ſhap'd like that of the former Sort, but are much larger, of a purple Colour when ripe, and do emit the Seeds in like manner, ſo that in Autumn they make a moſt beautiful Appearance, and in *May* and *June*, when they are in Flower, the circumambient Air is perfumed with their Odour: the Leaves of theſe Trees remaining Green all the Winter do afford an agreeable Proſpect in that Seaſon. They are of quick Growth, and generally riſe with ſtrait Stems, which is a conſiderable Addition to their Beauty; and ſince they are hardy enough to reſiſt the Cold of our Climate in the open Air, I doubt not but we ſhall have the Pleaſure of ſeeing their Flowers in a few Years; there being ſeveral Trees planted in the Gardens of ſome curious Perſons near *London*, where they have endured the Cold of four or five Winters without Shelter, and do make conſiderable Progreſs every Year.

Theſe Plants are both of them propagated from Seeds, for they do not take Root well by Laying, nor do thoſe few Plants which have been obtain'd from Layers thrive, nor are they ever like to make handſome Plants; but as there are no Plants in *England* which are likely to produce Seeds in many Years, ſo there is no way to obtain them, but by procuring their Seeds from *America*: Theſe Seeds ſhould be ſown in Tubs of Earth, ſo ſoon as they are ripe, (for if they are kept out of the Ground any time, they will not grow) theſe Tubs ſhould be ſent over to *England* as ſoon as poſſible, and when they arrive, they ſhould be placed on a gentle Hot-bed, obſerving to ſhade them from the Sun, and often refreſh them with Water: In this Situation the Plants will appear above Ground in a Month or five Weeks, and if they are kept moiſt and ſhaded from the Sun, will make conſiderable Progreſs. In

July

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July you ſhould begin to enure them to the open Air, but they ſhould not be expos'd to the Sun, for while they are young, the great Heat of the Sun is very injurious to them. In *October* the Tubs ſhould be placed under a Hot-bed Frame, where they may be cover'd in Froſty Weather with the Glaſſes; but in mild Weather, they ſhould be expos'd to the open Air, for if they are kept too cloſe, they will caſt their Leaves. In *March* following theſe Plants may be tranſplanted out of the Tubs, in doing of which, you ſhould be careful to take 'em up with as much Earth to their Roots as poſſible; then place each Plant into a Pot, which ſhould be filled with light freſh Earth, giving them ſome Water to ſettle the Earth to their Roots, and place the Pots into a Frame again, where they ſhould be cover'd with the Glaſſes in Cold Weather, or drying Winds, but they muſt be expos'd when the Weather is mild, and ſhould be frequently water'd: In this Frame they may remain about a Month, after which they ſhould be placed abroad in a ſhady Situation, obſerving to water them often in dry Weather. Theſe Plants may remain two Years in the Pots, that they may be removed into Shelter in Winter, becauſe they are ſomewhat tender while young; but afterwards they may be turned out of the Pots into the full Ground, obſerving to plant them in a pretty moiſt Soil, where they will make conſiderable Progreſs in a few Years.

MAHALEB; *vide* Ceraſus.

MAJORANA; Marjoram.

The *Characters* are;

It is a Verticillate Plant, whoſe Flower is compos'd of one Leaf: The Galea (or Creſt) is upright, roundiſh, and divided into two Parts: The Barba (or Beard) is cut into three Segments, ſo as to appear almoſt like a quinquifid Flower: The Flowers are collected into a ſhort, thick, round Head, and come out of a four-fold Order of Leaves, which are plac'd like Scales or Plates.

The *Species* are;

1. MAJORANA; *vulgaris. C. B. P.* Common ſweet Marjoram.

2. MAJORANA; *rotundifolia, ſcutellata, exotica. H. R. Par.* Round-leav'd exotick Marjoram, with a Leaf ſhap'd like a Saucer.

3. MAJORANA; *Cretica, Origani folio, villoſa, ſatureja odore, corymbis majoribus albis.* Hairy Candia Marjoram, with an Origani Leaf, a ſavoury Smell, and large, round, tufted, white Heads.

The firſt of theſe Plants is an Annual, and muſt be ſown every Year: The Seeds of this are annually brought from *Marſeilles* and other Places in the South of *France*, where it grows ſpontaneouſly, for it never ripens Seeds in this Country. The Seeds of this Plant ſhould be ſown the latter End of *March*, or the Beginning of *April*, upon a dry, warm Spot of Ground; and when the Plants come up, they muſt be carefully clear'd from Weeds, (which, if permitted to grow, will ſoon over-run and deſtroy them) and in very dry Weather, the Beds ſhould be often water'd, which will greatly promote the Growth of them.

In *June* theſe Plants will be pretty ſtrong; at which time you ſhould prepare ſome Beds of light rich Earth, into which you ſhould tranſplant ſuch of the Plants as require to be drawn out, where they come up too thick, at about four Inches Diſtance from each other, obſerving to water them, until they have taken Root; after which they will require no farther Care, but only to clear them from Weeds, and theſe Plants will grow ſtrong, and produce a greater Number of Heads (or Knots, as they are commonly call'd) than thoſe which remain'd in the Seed-beds unremov'd; for which it is much preferr'd to it in the Markets, where it is call'd *Knotted Marjoram*, to diſtinguiſh it from that which is not ſo. Towards the latter End of *July* theſe Plants will flower, which is the proper Seaſon to pull them up for Medicinal Uſe, when they ſhould be hung up in a ſhady Place to dry.

The ſecond Sort is a perennial Plant, which is preſerv'd by ſome curious Perſons in Pots, and plac'd in the Green-houſe in Winter. This Sort never produces Seeds with us, but is eaſily propagated by planting Cuttings or Slips during any of the Summer-months, in a Bed of light rich Earth, obſerving to water and ſhade them until they have taken Root: At *Michaelmas* theſe Plants ſhould be taken up and planted in Pots fill'd with rich light Earth; and when they are ſettled, they ſhould be remov'd into the Green-houſe, placing them near to the Windows, that they may have a good Share of free Air when the Weather is mild: you muſt often refreſh them with Water, but never give them too much at once, for that will rot them. With this Management the Plants may be preſerv'd freſh through the whole Year, and will be in a Condition to gather for Noſegays any Part of the Winter, and have as good a Scent as the *Sweet Marjoram*.

The third Sort was ſent into *England* by Sir *George Wheeler* from *Smyrna*, where it grows in great Plenty. This Plant riſes to the Height of two or three Feet, and becomes woody, but never produces any Seeds with us; tho' it is eaſily propagated by planting Slips or Cuttings in any of the Summer Months, after the manner as was directed for the common Sort, and muſt be hous'd in Winter, tho' it muſt not be kept too cloſe; for it only requires to be protected from great Rains and Froſt, but ſhould have as much free Air as poſſible in mild Weather, otherwiſe it is ſubject to draw and grow very weak.

MALABAR-NUT; *vide* Adhatoda.

MALA ÆTHIOPICA; *vide* Lycoperſicon.

MALA ARMENIACA; *vide* Armeniaca.

MALA COTONEA; *vide* Cydonia.

MALA INSANA; *vide* Melongena.

MALACOIDES.

The *Characters* are;

It hath the Flower and Appearance of a Mallow; *and hath a Fruit like that of a* Bramble, *but dry, which is compos'd of ſeveral Cells, collected into a Sort of little Head or Button, in which are contain'd many Kidney-ſhap'd Seeds.*

There is but one *Species* of this Plant, at preſent, in the *Engliſh* Gardens, which is,

MALACOIDES; *Betonicæ folio. Tourn.* Malacoides, with a Betony-leaf.

This Plant is propagated by ſowing the Seeds in *March*, upon a Bed of freſh light Earth; and when the Plants are come up, they ſhould be tranſplanted into a warm dry Border, where they are to remain, (for this Plant does not care for being often remov'd) and ſome of them may be planted in Pots, that they may be ſhelter'd in Winter; for in very ſevere Froſts they are often deſtroy'd: The Summer following they will produce their Flowers in *June*, and if the Seaſon be favourable, they will ſometimes ripen Seeds, but this does not often happen in our Country. There is no great Beauty in this Plant, but it is preſerv'd by ſuch as are curious in Variety.

MALLOW; *vide* Malva.

MALLOW-TREE; *vide* Althæa.

MALPIGHIA; Barbadoes-Cherry; *vulgò*.

The *Characters* are;

It hath a ſmall quinquifid Calix, which conſiſts of one Leaf, having bifid Segments: The Flower conſiſts of five Leaves, which expand in form of a Roſe, *having ſeveral* Stamina *collected in form of a Tube: The Ovary in the Bottom of the Flower-cup becomes a globular fleſhy ſoft Fruit, in which is a ſingle Capſule containing three ſtony winged Nuts.*

The *Species* are;

1. MALPIGHIA; *mali punici facie. Plum. N. G. Malpighia,* with the Face of Pomegranate, *commonly call'd in the* Weſt-Indies, Barbadoes-Cherry.

2. MALPIGHIA; *anguſtifolia, folio ſubtus ſpinoſo. Plum. Nov. Gen.* 46. *Malpighia,* with a narrow Leaf, having Spines on the underſide.

3. MALPIGHIA; *latifolia, folio ſubtus ſpinoſo. Plum. Nov. Gen.* 46. Broad-leav'd *Malpighia,* with Spines on the underſide of the Leaves.

4. MALPIGHIA; *humilis, illicis cocci-glandi fera foliis. Plum. N. G.* 46. Dwarf *Malpighia,* with Leaves like thoſe of the Kermes Oak.

The firſt Sort in the *Weſt-Indies,* riſes to be fifteen or ſixteen Feet high, where it produces great Quantities of a pleaſant tart Fruit, for which Reaſon it is propagated in moſt of the Gardens in thoſe Countries; but in *Europe* it is only preſerv'd as a Curioſity by ſuch Perſons as delight in Variety. It is eaſily propagated by Seeds (which ſhould be procur'd from the *Weſt-Indies)* and muſt be ſown upon a Hot-bed in *February*; when the Plants are come up, they muſt be tranſplanted each into a ſeparate ſmall Pot fill'd with freſh light Earth, and plung'd into a Hot-bed of Tanners-bark, obſerving to ſhade them from the Violence of the Sun until they have taken Root, as alſo to water 'em from time to time as they may require; and when the Plants begin to acquire Strength, and the Seaſon is warm, they ſhould have a good Share of Air (eſpecially in the Middle of the Day) by raiſing the Glaſſes with a Stone or Brick; and if the Glaſſes are wet, it will be proper to turn them, that thoſe rancid Vapours may be dry'd up.

In *June* theſe Plants will have grown ſo as to fill the ſmall Pots with their Roots; at which time they ſhould be ſhaken out (preſerving the Earth intire about their Roots) and plac'd into larger Pots, which ſhould be fill'd up with the ſame light freſh Earth, and plung'd again into the Hot-bed, obſerving to water them as before, as alſo to give them plenty of Air in hot Weather; and in the Heat of the Day, when the Sun is very hot, it will be proper to ſhade the Glaſſes with Mats.

By thus managing them, they will grow eighteen Inches high before Winter, and have pretty ſtrong Stems (provided they have had a ſufficient Quantity of Air;) and in *October*, when the Nights are cold, they ſhould be remov'd into the Stove, where they ſhould be plung'd into the Tanner's-Bark with the *Papaw's*, and other *Weſt-Indian*

Plants; which Stove ſhould be kept up to *Anana's* Heat, as mark'd on Mr. *Fowler's Thermometers*, obſerving to water them in the Winter with Water that has ſtood twenty-four Hours in the Stove, ſo as to have acquir'd a Warmth proportional to the Air of the Houſe.

The *Spring* following they muſt be ſhifted into larger Pots, and again plung'd into Tanner's Bark, in which they ſhould conſtantly be kept, if you would have them vigorous: tho' they will live in a warm Stove without the Bark; but then they will not make near the Progreſs, nor appear ſo beautiful, as if kept in the Tanner's Bark; and it is probable they may be brought to produce Fruit in Time, where the Stoves are good, and proper Care is taken of their Management.

The othere three Sorts do require the ſame Management as the former, but muſt be often refreſh'd with Water, and may be uſed ſomewhat more hardily, for they do grow in a cooler Country. The ſecond and third Sorts do grow as large as the firſt; but the third Kind is of very humble Growth, ſeldom riſing above three Feet high in its native Country; and in *England*, grows very ſlow; for I have one Plant of this Kind in the Phyſick Garden, which is two Years old from Seeds, and not more than two Inches high, altho' it appears to be in very good Condition. The other three Sorts have flower'd in the Phyſick Garden, but I have not heard that there has been Fruit produced on any of theſe Plants in *Europe*.

MALT-DUST is accounted a great Enricher of barren Ground: It contains in it a natural Heat and Sweetneſs, which gives the Earth whereon it is laid a proper Fermentation, as thoſe who live in Malting Countries have found by Experience.

Some are of Opinion, that there is not a greater Sweetener than *Malt-Duſt*, where the Grounds are natural Clay, and have contracted a Sourneſs and Auſterity, whether by reaſon of its having lain long untilled, and unexpos'd to the Air, or by reaſon of Water having ſtood long thereon.

MALVA; Mallows.

The *Characters* are;

It hath a fibroſe Root: The Leaves are round, or angular: The Flower conſiſts of one Leaf, is of the expanded Bell-ſhap'd Kind, and cut into five Segments almoſt to the Bottom: From the Centre riſes a pyramidal Tube, for the moſt part loaded with many ſmall Threads or Filaments: From the Centre of the Flower-cup riſes the Pointal in the Tube, which becomes the Fruit, which is flat, round, and ſometimes pointed, wrapt up, for the moſt part, within the Flower-cup, and divided into ſeveral Cells ſo diſpos'd round the Axle, that each little Lodge appears moſt artificially jointed within the correſponding Striæ *or Channels: The Seed is, many times, ſhap'd like a Kidney.*

The *Species* are;

1. MALVA; *vulgaris, flore majore, folio ſinuato. J. B.* Common *Mallow*, with a large Flower.

2. MALVA; *ſylveſtris, folio ſinuato, flore albo. Sutherl.* Common *Mallow*, with a large white Flower.

3. MALVA; *Sinenſis, erecta, floſculis albis minimis.* China Upright *Mallow*, with ſmall white Flowers.

4. MALVA; *foliis criſpis. C. B. P.* The curl'd or furbeloe'd *Mallow*.

5. MALVA; *folio vario. C. B. P.* *Mallow*, with a variable Leaf.

6. Malva; *Orientalis erectior, flore magno ſuave-rubente. T. Cor.* Upright Oriental *Mallow*, with a large beautiful red Flower.

The firſt of theſe Plants is found wild in moſt Parts of *England*, but is rarely cultivated in Gardens. This is the Sort commonly us'd in Medicine, with which the Markets are ſupply'd by the Herb-folks, who gather it in the Fields.

The ſecond Sort is a Variety of the firſt, from which it differs in the Colour of the Flower: This is preſerv'd by ſuch as are curious in preſerving great Varieties of Plants, but is rarely cultivated in other Gardens.

The third Sort was formerly ſent from *China* as a Pot-herb, and hath been cultivated in ſome curious Gardens in *England*; though 'tis not likely to obtain here as an eſculent Plant, ſince we have many others which are preferable to it for that Purpoſe. This is an annual Plant, which will propagate it ſelf faſt enough, provided it be permitted to ſcatter its Seeds, when they ſeldom fail to grow, and are often very troubleſome when they have gotten Poſſeſſion of the Ground.

The fourth Sort is preſerv'd by ſome curious Perſons for the Beauty of its Leaves, which are naturally furbeloe'd round their Edges: This is alſo an annual Plant, which will riſe four or five Feet high, and propagate it ſelf in the ſame manner as the former.

The fifth Sort is more rare than any of the former: It grows wild in *Spain* and *Italy*, from whence the Seeds were brought into *England*, and is preſerv'd by the Lovers of Variety, but there is no great Beauty in the Plant.

The ſixth Sort is alſo an annual Plant, which commonly grows upright to the Height of three or four Feet, and produces great Numbers of beautiful red Flowers; which renders it the beſt worth propagating in large Flower-Gardens, where being plac'd in the middle of large Borders, it makes a beautiful Appearance.

The Seeds of theſe Plants ſhould be ſown in *March* upon a Bed of freſh light Earth; and when they are come up four Inches high, they ſhould be tranſplanted where they are deſign'd to be continued, allowing 'em a large Diſtance; for if they are planted too cloſe, they do not appear ſo well: but they are beſt when intermix'd with other Flowers of the ſame Growth, where they afford an agreeable Variety.

Theſe Seeds may alſo be ſown in *Auguſt*; and the Plants will endure the greateſt Cold of our Climate, if plac'd on a dry Soil, and grow larger, and flower ſooner than thoſe ſown in the *Spring*: or if the Seeds are permitted to ſcatter, they will come up as the two former Sorts, and thrive equally as well.

There are ſeveral other Sorts of *Mallows*, ſome of which are Natives of this Country: but as they are Plants of no great Beauty or Uſe, ſo it would be ſuperfluous to mention them in this Place.

MALVA ARBOREA; *vide* Althæa.

MALVA ROSEA; Roſe Mallow, *or* Hollyhock.

The *Characters* are;

It hath a larger and more expanded Flower than the Mallow, *which cloſely adheres to the Stalk, and, in many Species, the Flowers* *are double, where the Petals occupy the Place of the Style: It is in every reſpect Larger than the Common* Mallow; *the Leaves are rougher, and the Plant grows almoſt ſhrubby.*

The *Species* are;

1. Malva Roſea; *ſive hortenſis, flore albo. J. B.* Single White Hollyhock.

2. Malva; *hortenſis, flore ſimplici rubro. H. Eyſt.* Single Red Hollyhock.

3. Malva Roſea; *folio rotundo, flore ex rubro nigricante. C. B. P.* Hollyhock, with a blackiſh-red Flower.

4. Malva Roſea; *folio ſubrotundo, flore ſimplici luteo. H. R. Par.* Hollyhock, with a Single Yellow Flower.

5. Malva Roſea; *folio ſubrotundo, flore pleno albo. C. B. P.* Double White Hollyhock.

6. Malva; *hortenſis, flore pleno, rubro. H. Eyſt.* Double Red Hollyhock.

7. Malva Roſea; *multiplex, flore incarnato. H. Eyſt.* Hollyhock, with a Double Fleſh-colour'd Flower.

8. Malva; *hortenſis, flore pleno, atro-rubente. H. Eyſt.* Double Hollyhock, with a Dark-red Flower.

9. Malva Roſea; *folio ſubrotundo, flore pleno, puniceo. C. B. P.* Hollyhock, with a Double Scarlet Flower.

10. Malva Roſea; *folio ſubrotundo, flore pleno, ſubluteo. H. R. Par.* Hollyhock, with a Double Yellowiſh Flower.

There are ſome other Varieties of theſe Plants, which differ in the Colour of their Flowers: but as they are near to one or other of theſe Colours, and are either paler or deeper (none of the Sorts yet known being intirely different in Colour from thoſe here mention'd;) ſo it would be needleſs in this Place to inſert all their minute Diſtinctions, eſpecially as they are ſeminal Variations, and ſeldom produce the ſame exact Colours again from Seeds.

Theſe Plants are all propagated from Seeds, which ſhould be ſown upon a Bed of freſh Earth in *March*; and when the Plants are come up pretty ſtrong, they muſt be tranſplanted out into Nurſery-beds at about eight Inches Diſtance from each other, obſerving to water them until they have taken Root: After which they will require no farther Care until the *Michaelmas* following, but only to keep them clear from Weeds; at which time they ſhould be tranſplanted into Rows two Feet aſunder, and a Foot Diſtance in the Rows; in which Place they may continue until they flower, when you ſhould mark all thoſe with Double Flowers, which have good Colours, with Sticks, that they may be tranſplanted into the Borders of large Gardens at *Michaelmas*, where they will remain four or five Years, and produce their Flowers very ſtrong: but when the Roots are much older they begin to decay, and do not produce their Stems ſo ſtrong, nor are their Flowers ſo large; wherefore there ſhould always be a Supply of young Plants rais'd from Seeds every third or fourth Year, in order to have the Flowers in Perfection: But it is the better way to change the Seeds every three or four Years, with ſome Perſon of Integrity who lives at a conſiderable Diſtance, and is exact to ſave Seeds from none but Double Flowers, and ſuch as are well-colour'd; by which means you may preſerve the Sorts well from degenerating: but if you constantly ſave the Seeds in the ſame Place, they will in a few Years become little worth.

The ſeveral Varieties of theſe Plants, when carefully intermix'd in large Wilderneſs Borders, or Avenues, afford an agreeable Proſpect during their Seaſon of flowering (which is commonly in *July*) but as they grow to a conſiderable Height, and ſpread pretty wide, ſo they take up too much Room, and appear unſightly in ſmall Flower Gardens: They ſhould alſo be ſupported with Stakes, otherwiſe they are ſubject to be broken down by ſtrong Winds.

When the Stalks of theſe Plants begin to decay, they ſhould be cut down pretty cloſe to the Ground, to incourage them to ſhoot out freſh Heads for the ſucceeding Year, otherwiſe they ſometimes rot and deſtroy the Roots.

MALUS; The Apple-Tree.

The *Characters* are;

The Tree groweth very large; the Branches ſpread (and are more depreſſed than thoſe of the Pear Tree;) the Flower conſiſts of five Leaves, which expand in form of a Roſe; the Fruit is hollowed about the Footſtalk, is for the moſt part roundiſh, and umbilicated at the Top, is fleſhy, and divided into five Cells or Partitions, in each of which is lodg'd one oblong Seed.

The *Species* are;

1. MALUS; *ſylveſtris, acido fructu albo. Tourn.* The Crab Tree.

2. MALUS; *ſylveſtris, foliis ex albo eleganter variegatis. Cat. Plant. Hort.* The Crab Tree, with ſtrip'd Leaves.

3. MALUS; *ſylveſtris, Virginiana, floribus odoratis. Cat. Plant. Hort.* Virginian Crab Tree, with ſweet Flowers.

4. MALUS; *fructifera, flore fugaci. H. R. Par.* The Fig Apple.

5. MALUS; *pumila, quæ potius frutex, quam Arbor, fructu rubente & candido. C. B. P.* The Paradiſe Apple.

6. MALUS; *ſativa, foliis eleganter variegatis. Cat. Plant. Hort.* Apple Tree, with ſtrip'd Leaves.

The ſeveral Sorts of *Apples* which are at preſent eſteem'd for their Fruit in the curious Gardens near *London*, may be ſeen under the Article of *Apple*, where a particular Account of their Planting, Pruning, *&c.* is fully laid down; to which I refer the Reader; and in this Place ſhall only take notice of the above-mention'd Sorts, which are only preſerv'd as Curioſities, or for Stocks to graft the more generous Kinds of Fruit upon: The *Crab-Tree* is generally preferr'd to moſt other Sorts for this Purpoſe, it being the moſt durable of them, and not ſo liable to canker as thoſe which are produc'd from Kernels of better *Apples*: but theſe ſhould be obtain'd from Kernels, and not Suckers taken from the Woods, which are generally ill-rooted, and ſeldom make a handſome Stock; nor will they ſo readily join with the Cyon, for which Reaſon they ſhould not be planted.

The *Paradiſe Apple* hath, of late Years, greatly obtained for Stocks to graft or bud upon; but theſe are not of long Duration; nor will the Trees grafted upon them ever grow to any Size, unleſs they are planted ſo low as that the Cyon may ſtrike Root into the Ground, when it will be equal to no Stock, for the Graft will draw its Nouriſhment from the Ground; ſo that it is only by way of Curioſity, or for very ſmall Gardens, that theſe Stock are proper, ſince there can never be expected any conſiderable Quantity of Fruit from ſuch Trees.

The *Virginian Crab Tree* with ſweet Flowers, is preſerv'd by ſuch Perſons as are curious in collecting great Variety of Trees: It may be propagated by Budding or Grafting it upon the common *Crab* or *Apple-Tree*; but it is ſomewhat tender while young, wherefore it ſhould be planted in a warm Situation, otherwiſe it will be ſubject to ſuffer by an extreme hard Winter. The Flowers of this Tree are ſaid to be exceeding ſweet in *Virginia*, where it grows in the Woods in great Plenty; but I could not obſerve much Scent in ſome of them which flower'd in *England* the laſt Year; ſo that I am in doubt whether the Sort at preſent in the Gardens is the very ſame with that of *Virginia*, or perhaps it may have degenerated by ſowing the Seeds, which, I ſuppoſe, is the Way it was firſt obtain'd in *England*.

The *Fig-Apple* is ſuppos'd, by many Perſons, to be produc'd without a previous Flower. But this Opinion is rejected by ſome curious Obſervers, who affirm, there is a ſmall Flower precedes the Fruit, which is very fugacious, ſeldom continuing above a Day or two. Now, which of theſe Opinions is the right, I have not, as yet, had an Opportunity to determine, not having a Tree in my own Poſſeſſion which is arriv'd at Maturity to produce Fruit; tho' it might reaſonably be expected, that ſuch, who have had Trees of this Kind ſeveral Years, might have determin'd this Point long ere this Time.

I remember an Account of a large Tree of this Kind, mention'd in a Letter from *New-England*, written by *Paul Dudley*, Eſq; to the *Royal Society*, and publiſh'd in the *Philoſophical Tranſactions*, Numb. 385. which was exceeding large, and produc'd great Quantities of Fruit, without any previous Flowers; but it grew at ſome Diſtance from his Habitation, and he having no other Opportunity to obſerve it ſtrictly himſelf, but by viſiting the Place two or three times about the Seaſon of Flowering, and not being appriz'd of the ſudden Decay of the Flowers, they might eaſily be ſuppos'd to have appear'd, and dropt off between the Times of his viſiting the Place.

The two Sorts with ſtrip'd Leaves are preſerv'd by ſuch as are curious in collecting ſuch Varieties: Theſe may be propagated by grafting or budding them upon the common *Apple* or *Crab-Tree*; but they ſhould not be planted in a very rich Soil, which would cauſe them to grow very free, whereby their Leaves would become entirely green again.

MALUS ARMENIA; *vide* Armeniaca.

MALUS AURANTIA; *vide* Aurantia.

MALUS LIMONIA; *vide* Limonia.

MALUS MEDICA; *vide* Citreum.

MALUS PERSICA; *vide* Perſica.

MALUS PUNICA; *vide* Punica.

MAMEI; The Mammee Tree.

The *Characters* are;

It hath a roſaceous Flower, which conſiſts of ſeveral Leaves placed in a circular Order, from whoſe Cup ariſes the Pointal, which afterward becomes an almoſt ſpherical fleſhy Fruit, *containing two or three Seeds encloſ'd in hard rough Shells.*

There is but one *Species* of this Tree known *(viz.)*

Mamei; *magno fructu Perſica ſapore. Plum. Nov. Gen.* 44. The *Mammee*, with a large Fruit taſteing like a Peach.

This Tree, in the *Weſt-Indies*, grows to the Height of ſixty or ſeventy Feet; the Leaves are large and ſtiff, and do continue green all the Year; the Fruit is as large as a Man's Fiſt; when ripe, is of a yellowiſh green Colour, and is very grateful to the Taſte. It grows in great Plenty in the *Spaniſh Weſt-Indies*, where the Fruit is generally ſold in their Markets, and is eſteemed one of the beſt Fruits of the Country. It alſo grows on the Hills in *Jamaica*, and has been tranſplanted into moſt of the *Caribbee* Iſlands, where it thrives exceeding well.

In *England*, there are ſome few of theſe Plants, which are preſerved with great Care, by ſuch as are curious in cultivating exotick Plants; but there are none of any conſiderable Size: So that we cannot expect to ſee either Fruit or Flowers for ſome Years. Theſe Plants may be propagated by planting the Stones (which are often brought from the *Weſt-Indies*) into Pots filled with light freſh Earth, and plunged into a Hot-bed of Tanners-Bark, obſerving to water the Earth whenever it appears dry. In about a Month the Plants will begin to appear above-ground, after which they muſt be frequently refreſh'd with Water, and in hot Weather, the Glaſſes of the Hot-bed ſhould be rais'd to let in freſh Air. In two Months the Roots of the Plants will have filled the Pots, when you ſhould provide ſome Pots of a little larger Size, into which you ſhould tranſplant the Plants, being careful to preſerve as much Earth to their Roots as poſſible; then you ſhould fill up the Pots with freſh light Earth, and plunge them into the Bark-bed again, obſerving to water and ſhade 'em until they have taken Root, after which they ſhould be conſtantly refreſh'd with Water (as you ſhall find they want it) and muſt have Air in hot Weather. In this Bed they may remain till *Michaelmas*, when they muſt be removed into the Bark-Stove, where they muſt conſtantly be kept, obſerving to refreſh them with Water frequently, as alſo to clean their Leaves from the Filth they are apt to contract in the Stove; and the Spring following, they ſhould be ſhifted into freſh Earth, and, if they require it, into larger Pots, and the Bark-bed muſt be freſh ſtir'd, and ſome new Tan mix'd therewith, to renew the Heat. This ſhould be repeated as often as there may be a Neceſſity for it, which is at leaſt three times a Year: In all other reſpects this Tree may be treated after the Manner directed for the Coffee-Tree.

MANCANILLA; The Manchineel Tree.

The *Characters* are;

It hath male Flowers (or Katkins) which are produced at remote Diſtances from the Embryo's on the ſame Tree; the Embryo becomes a round fleſhy Fruit, in which is contained a rough woody Nut, encloſing four or five flat Seeds.

The *Species* are;

1. Mançanilla; *Pyrifacie Plum. Nov. Gen.* 50. The *Manchineel*, with the Face of a Pear-Tree.

2. MANÇANILLA; *Aquifolii foliis. Plum. Nov. Gen.* 50. The *Manchineel*, with Leaves like Holly.

3. MANÇANILLA; *Lauri foliis oblongis. Plum. Nov. Gen.* 50. The *Manchineel*, with oblong Laurel Leaves.

The *Manchineel* is a Native of the *Weſt-Indies*, where it grows on low ſandy Land, or near Gullies, where Water runs. The three Sorts here mention'd, are diſtinguiſh'd by *Botaniſts*, but I believe their Difference is not remark'd by the Natives. They grow to be very large Trees, equal to the Size of an Oak, and are much eſteemed for their Wood, which is ſawn out into Planks, and brought over to *England*: It is uſed for Cabinets, Book-Caſes, *&c.* and will poliſh very well; is of a beautiful Grain, and will laſt a long Time. In cutting down of theſe Trees, they are very careful to burn out the Juice of the Bark before they begin, otherwiſe the Perſons are in Danger of loſing their Eyes, by ſome of the Sap getting into them, which is of a milky Colour, and ſo very cauſtick, that it will raiſe Bliſters on the Skin, and burn Holes in Linnen. The Fruit of this Tree, when ripe, is of the Colour and Size of a golden Pippen, for which many of the *Europeans* have taken it, and ſome by eating thereof, loſt their Lives, and others have greatly ſuffered; the Fleſh is not much thicker than a Crown-piece, and not very diſagreeable to the Taſte, but will corrode the Mouth and Throat. The Leaves of theſe Trees do alſo abound with a milky Juice, which is of the ſame Nature; ſo that it is dangerous being under their Drip: The Cattle, in *America*, never ſhelter themſelves under them, nor will any Vegetable ſcarcely grow under their Shade; yet the Goats do eat this Fruit, without any manifeſt Injury to themſelves, or their Milk, which is not altered by this Food.

In *England*, there are ſome of theſe Trees preſerved by Perſons who are curious in propagating exotick Plants. They may be rais'd from Seeds, by putting the whole Nut into a Pot of freſh Earth, and then plunge it into a Hot-bed of Tanners-Bark, obſerving to refreſh the Earth often with Water; from one of theſe Nuts will ariſe four or five Plants, which when grown about three Inches high, may be ſeparated, and placed each into a ſmall Pot filled with light Earth, and plunged again into the Hot-bed, obſerving to water and ſhade 'em until they have taken Root, after which, they muſt be managed as was before directed for the *Mammee*, to which I refer the Reader, to avoid Repetition.

MANDRAGORA; Mandrake.

The *Characters* are;

The Flower conſiſts of one Leaf, in the Shape of a Bell, and is divided at the Top into ſeveral Parts: The Pointal afterwards becomes a globular ſoft Fruit, in which is contain'd many Kidney-ſhap'd Seeds.

The *Species* are;

1. MANDRAGORA; *fructu rotundo.* C. B. P. Common *Mandrake*, with a round Fruit.

2. MANDRAGORA; *flore ſub caeruleo purpuraſcente.* C. B. P. *Mandrake*, with a purpliſh blue Flower.

Theſe Plants are propagated by Seeds, which ſhould be ſown upon a Bed of light Earth ſoon after they are ripe; for, if they are kept until the *Spring*, they ſeldom ſucceed well; and, in the *Spring*, the Plants will appear above-ground, when they ſhould be carefully clear'd from Weeds; and, in very dry Weather, they muſt be refreſh'd with Water, which will greatly promote their Growth: In this Bed they ſhould remain till the Latter-end of *Auguſt* (obſerving always to keep them clear from Weeds) at which Time they ſhould be taken up very carefully, and tranſplanted into the Places where they are to remain, which ſhould be a light deep Soil, for their Roots do always run downward very deep; ſo that, if the Soil be wet, they are often rotted in Winter; and, if it be too near the Gravel or Chalk, they ſeldom thrive well; but, if the Soil be good, and they are not diſturb'd, the Plants will grow to a large Size in a few Years, and will produce great Quantities of Flowers and Fruit, and they will abide a great many Years.

I have been inform'd, by ſome Perſons of Credit, that one of theſe Roots will remain ſound above fifty Years, and be as vigorous as a young Plant; but they ſhould never be remov'd after their Roots have arriv'd to any conſiderable Size, which would break their lower Fibres, and ſo ſtunt the Plants, as that they will not recover their former Strength in two or three Years.

As to the feigned Reſemblance of a Human Form, which the Roots of this Plant are ſaid to carry, 'tis all Impoſture, owing to the Cunning of Quacks and Mountebanks, who deceive the Populace and the Ignorant, with fictitious Images ſhap'd from the freſh Roots of *Briony* and other Plants: And what is reported as to the Manner of rooting up this Plant, by tying a Dog thereto, to prevent the certain Death of the Perſon who ſhould dare to attempt it, and the Groans it emits upon the Force offer'd, *&c.* 'tis all a fulſome Fable; for I have taken up ſeveral large Roots of this Plant, ſome of which have been tranſplanted into other Places, but could never obſerve any particular Difference in this from any other deep-rooting Plant.

MAPLE; *vide* Acer.

MARACOCK; *vide* Granadilla.

MARJORAM; *vide* Majorana.

MARLE, is a Kind of Clay, which is become fatter, and of a more inriching Quality by a better Fermentation, and by its having lain ſo deep in the Earth as not to have ſpent or weaken'd its fertilizing Quality by any Product.

Marle is ſuppos'd to be much of the Nature of *Chalk*, and is believ'd to be fertile from its ſalt and oily Quality, and that it contracts its Salts from the Air, and for that Reaſon is the better the longer it is expos'd to it.

Marles are of different Qualities in different Counties of *England*, There are reckon'd to be four Sorts of *Marles* in *Suſſex*, a Grey, a Blue, a Yellow, and a Red: Of theſe the Blue is accounted the beſt, the Yellow the next, and the Grey the next to that; and as for the Red, that is the leaſt durable.

The *Marle* in *Suſſex* is moſt like Fuller's-Earth, and therefore muſt certainly be the fatteſt; whereas that in the *North-Country* runs much upon the Loam.

In *Cheſhire* they reckon ſix Sorts of *Marle:*

1. The *Cowſhut Marle*, which is of a browniſh Colour, with blue Veins in it, and little Lumps of Chalk or Lime-ſtone: It is commonly found under Clay or low

and ſeven or eight Feet
d is very hard to dig.

e, Stale, or *Flag-Marle*,
is a kind of ſoft Stone, or
late of a blue or bluiſh Co-
it will eaſily diſſolve with
Rain: This is found near
nd the Sides of Hills, and
r laſting Sort of *Marle*.

afford/ſhire they eſteem the
Slate-Marle better than the
rle, and reckon the Blue
Arable-Land, and the Grey
ure.

t-Marle, or *Delving-Marle*,
is cloſe, ſtrong, and very
a brown Colour, and is
n the Sides of Hills, and in
r boggy Grounds, which
light Sand in them about
et or a Yard deep: This is
ed the ſtrongeſt of all
and is very good for ſan-
d, but the Land muſt have
e Quantity laid on.

lay-Marle; This reſembles
nd is pretty near akin to it,
atter, and ſometimes mix'd
halk-ſtones.

el-Marle; which lies com-
in the Bottom of Pits that
g, and is of it ſelf apt to
into cubical Bits: This is
nes under ſandy Land.

aper-Marle; which reſem-
ves or Pieces of brown Pa-
ut ſomething of a lighter
: This lies near Coals. This
leſs eſteem'd, it being hard
ot.

Properties of any Sorts of
, and by which the Good-
them may be beſt known,
ter judg'd of by their Purity
compoundedneſs, than their
; as if it will break in Pie-
e Dice, or into thin Flakes,
ſmooth like Lead-Ore, and
out a Mixture of Gravel or
Sand; if it will ſlake like Slate-ſtones, and ſhatter after wet, or will turn to Duſt when it has been expos'd to the Sun; or will not hang and ſtick together when it is thoroughly dry, like tough Clay; but is fat and tender, and will open the Land it is laid on, and not bind; it may be taken for granted that it will be beneficial to it.

Some adviſe, to try the Goodneſs of *Marle*, by putting ſome of it into a Glaſs of Water; and they account it to be good, if it be ſo tender that the Lumps break and diſſolve as ſoon as it comes to the Bottom: They alſo reckon it a good Sign, if it ſparkle in the Water, and feel fat between the Fingers; but the ſureſt Sign of its Goodneſs, is, if it diſſolve by Wet or Froſt.

Some approve of marling Land ſhallow, becauſe, they ſay, it is apt to work downwards: Others, of laying it in deep at firſt, becauſe the Sun waſtes the Fatneſs of it.

Some reccommend *Marles* for the improving of ſandy looſe Land: But the ſureſt way to know what Lands it will ſuit beſt with, is, to try with a little of it on Lands ſuppos'd to be of a contrary Nature to it.

Marles do not make ſo good an Improvement of Lands the firſt Year, as afterwards.

Some adviſe, firſt to burn the *Marle* before it is laid on the Lands, which, if it be done, one Load will go as far as five.

The Quantity of the *Marle* ought to be in Proportion to the Depth of the Earth; and Over-marling has often prov'd of worſe Conſequence than Under-marling.

MARRUBIASTRUM; Baſtard Horehound.

The *Characters* are;

It is one of the verticillate Plants with a Lip-flower, conſiſting of one Leaf, whoſe Upper Lip is hollow like a Spoon, but the Lower Lip (or Beard) is cut into three Segments: Out of the Centre of the Flower riſes the Pointal, attended, as it were, by four Embryo's, which afterwards turn to ſo many roundiſh Seeds. To which may be added, The little Flower-cup is cut into five ſmall Segments, upon which are produc'd ſmall Spines; and the Flowers grow in thick Whorles round the Stalk.

The *Species* are;

1. MARRUBIASTRUM; *vulgare. Tourn.* Common Baſtard Hore-hound.

2. MARRUBIASTRUM; *ſideritidis folio, caliculis aculeatis, flore candicante. Tourn.* Baſtard Hore-hound, with an Ironwort Leaf, and a white Flower.

3. MARRUBIASTRUM; *ſideritidis folio, caliculis, aculeatis, flore flavo cum limbo atro-purpureo. Tourn.* Baſtard Hore-hound, with an Ironwort Leaf, and a yellow Flower with a dark purple Edge.

4. MARRUBIASTRUM; *folio Cardiacæ. Bocco. Muſ.* Baſtard Hore-hound, with a Mother-wort Leaf.

The firſt of theſe Plants is found wild amongſt the Corn in *Kent*, and ſome other Counties in *England*, and is ſeldom cultivated, except in Botanick Gardens, for the ſake of Variety, where are alſo ſome other Species of this Plant preſerved for the ſame Purpoſe.

The other three Sorts are found wild in the Southern Parts of *France* and *Italy*, from whence the Seeds have been ſent to the Curious in Botany in divers Parts of *Europe*.

Theſe Plants may be all propagated by ſowing their Seeds as ſoon as they are ripe, upon a Bed of light dry Soil, where they will come up the ſame *Autumn*, and abide the Cold of our ordinary Winters very well, and may be tranſplanted out in the *Spring* where they are to remain. In *June* they will flower, and their Seeds will be ripe in *July* or *Auguſt*.

MARRUBIUM; Hore-hound.

The *Characters* are;

It is a verticillate Plant with a Lip-Flower conſiſting of one Leaf, whoſe Upper-Lip (or Creſt) is upright with two Horns; but the Under-Lip (or Beard) is divided into three Parts: The Pointal, which is fix'd to the Hinder-Part of the Flower, is attended by four Embryo's, which become ſo many oblong Seeds, inclos'd in the Flower-Cup.

The *Species are*;

1. MARRUBIUM; *album, vulgare. C. B. P.* Common White Hore-hound.

2. MARRUBIUM; *album, latifolium, peregrinum. C. B. P.* Broad-leav'd Foreign White Hore-hound.

3. MARRUBIUM; *album, anguſtifolium, peregrinum. C. B, P.* Narrow-leav'd Foreign White Hore-hound.

4. MARRUBIUM; *Alyſſon dictum, foliis profundè inciſis. H. L.* Hore-hound, *call'd* Madwort, with Leaves deeply cut in.

5. MARRUBIUM; *Hiſpanicum, ſupinum, foliis ſericeis argenteis. Tourn.* Low-Spaniſh Hore-hound, with Silken Silver-colour'd Leaves.

There are ſome other Species of this Plant, which are preſerv'd in curious Botanick Gardens, for the ſake of Variety: but as they are of no Uſe or Beauty, ſo it would be needleſs to enumerate them in this Place.

The firſt Sort here mention'd is us'd in Medicine: This is found wild in divers Parts of *England*. The other Sorts are only kept by ſuch as delight in a Variety of Plants; for they have no great Beauty in their Flowers, nor are there any Uſes to which they are applied.

They may be all propagated by ſowing their Seeds in *March* upon a Bed of freſh light Earth; and when they are come up, they ſhould be tranſplanted out into a dry Soil, at about eighteen Inches or two Feet aſunder, where they will require no farther Culture than only to keep them clear from Weeds. But the fourth Sort is ſomewhat tender, and ſhould have a warm Situation, otherwiſe it is in Danger of being kill'd by Froſts.

MARRUBIUM NIGRUM; *vide* Ballote.

MARTAGON; *vide* Lilium.

MARVEL OF PERU; *vide* Jalapa.

MARUM; Maſtick.

The *Characters* are;

It is a Plant with a Lip-Flower, conſiſting of one Leaf, but has no Galea *(or Creſt) the* Stamina *ſupplying the Place of it; but the Under-Lip is divided into five large Segments, the middlemoſt of which is hollow like a Spoon: Theſe Flowers are produc'd ſingle from the Wings of the Leaves. To which may be added, It has the Appearance of a Shrub, and a hot volatile Smell.*

We have but one *Species* of this Plant, at preſent, in *England*, which is,

MARUM; *Syriacum, vel Creticum. H. L.* Syrian Maſtick, *vulgò*.

This Plant is propagated by planting Cuttings, in any of the Summer Months, upon a Bed of freſh light rich Earth, obſerving to water and ſhade them until they have taken Root; after which, they may be tranſplanted either into Pots or Borders of the ſame freſh light rich Earth: But the greateſt Difficulty is, to preſerve it from the Cats, who will come from a great Diſtance to tear this Plant in Pieces, and from whom there is ſcarcely any guarding it, eſpecially near Towns and Cities, where there are many of theſe Animals, unleſs by planting large Quantities of it; for it is obſerveable, that where there are but few Plants, the Cats will not leave them, until they have quite demoliſh'd them; whereas, when a large Quantity of the Plants are ſet in the ſame Place, they will not come near them.

Thoſe Plants, which are put into Pots, ſhould be ſhelter'd in Winter; but thoſe in the full Ground, will abide the Cold of our ordinary Winters very well, provided they are planted on a warm dry Soil; and may be clipt into Pyramids or Balls, in which Figures I have ſeen ſome Plants of this Kind near three Feet high, which have endur'd the open Air ſeveral Years without any Covering.

MARUM VULGARE; *vide* Maſtichina.

MARYGOLD; *vide* Caltha.

MARYGOLD (AFRICAN;) *vide* Tagetes.

MARYGOLD (FIG;) *vide* Ficoides.

MARYGOLD (FRENCH;) *vide* Tagetes.

MASTER-WORT; *vide* Imperatoria.

MASTICHINA; Herb Maſtick, *or* Maſtick-Thyme.

The *Characters* are;

The Leaves are like thoſe of Thyme, *but larger: The Stalks are upright and ſhrubby: The Cup of the Flower is long, narrow, and tubulous, but is ſpread open at the Top,* *where it is cut into five long ſlender Segments, and has a Woollineſs over every Part of it: The* Galea *(or Creſt) of the Flower ſtands upright, and is divided into two Parts: The Beard (or Lower-Lip) is divided into three Segments, ſo that it appears ſomewhat like a Flower with five Leaves: The Flowers are collected into thick Whorles, and have a white Down growing upon the oblong Heads.*

The *Species* are;

1. MASTICHINA; *Boerh. Ind.* Herb Maſtick, *or* Maſtick-Thyme.

2. MASTICHINA; *folio minore.* Herb Maſtick, with a leſſer Leaf.

There ſeems to be another Variety of this Plant in ſome of the *Engliſh* Gardens, which is of humbler Growth than the Common Sort: The Spikes of Flowers are alſo ſhorter and looſer; but the Leaves are full as large as thoſe of the common Sort. This I don't remember to have ſeen taken notice of in any of the Books of *Botany*, tho' it ſeems conſtantly to retain this Difference.

Theſe Plants may be propagated by planting Cuttings, during any of the Summer Months, in a Bed of light rich Earth, obſerving to water and ſhade them, until they have taken Root: After which they may be tranſplanted into a light dry Soil, and have a warm Situation, where they will endure the Cold of our ordinary Winters very well, and produce great Quantities of Flowers in *July*, but ſeldom ripen their Seeds in this Country,

The Flowering Part of this Plant is order'd as an Ingredient in *Venice Treacle*, for which Purpoſe it ſhould be propagated in *Phyſick-Gardens*. And the Plant having an agreeable Scent, and being eaſily cultivated, may merit a Place in the Borders of every good Garden, where it may be reduced to a regular Head, and will appear very handſome.

MATRICARIA; Feverfew.

The *Characters* are;

It hath a fibroſe Root: The Leaves are conjugated, and divided into many Segments: The Cup of the Flower is ſquamoſe, and hemiſpherical: The Flowers grow in an Umbel upon the Top of the Stalks, and the Rays of the Flower are for the moſt Part white.

The *Species* are;

1. MATRICARIA; *vulgaris, vel ſativa. C. B. P.* Common Feverfew.

2. MATRICARIA; *vulgaris, vel ſativa, caulibus rubentibus. H. L.* Common Feverfew, with reddiſh Stalks.

3. MATRICARIA; *vulgaris, vel ſativa, floribus nudis bullatis. H. L.* Common Feverfew, with naked Flowers.

4. MATRICARIA; *vulgaris, vel ſativa, florum petalis fiſtuloſis. H. L.* Common Feverfew, with the Petals of the Flower quill'd or fiſtulous.

5. MATRICARIA; *vulgaris, vel ſativa, florum petalis fiſtuloſis & brevioribus. H. L.* Common Feverfew, with ſhort fiſtulous Petals.

6. MATRICARIA; *flore pleno. C. B. P.* Double-flower'd Feverfew.

7. MATRICARIA; *flore pleno, petalis fiſtuloſis. H. L.* Feverfew, with Double fiſtulous Flowers.

8. MATRICARIA; *flore pleno, petalis marginalibus planis, diſcoidibus fiſtuloſis. H. L.* Double Feverfew, with the Petals round the Border plain, but thoſe in the middle of the Flower fiſtulous.

9. MATRICARIA; *foliis elegantiſſimè criſpis, & petalis flore fiſtuloſis. Tourn.* Feverfew, with elegant curl'd

Leaves, and the Petals of the
rs fiſtulous.
: firſt of theſe *Species* (which
Sort uſed in Medicine) is
wild upon Dunghills and un-
ited Places in divers Parts of
id, but is cultivated in thoſe
is which propagate medicinal
to ſupply the Markets. The
Sorts are preſerv'd in cu-
Botanick Gardens for Variety:
he ſixth, ſeventh, and eighth
deſerve a Place in the Borders
e Gardens, for the Beauty of
Flowers.

ſe Plants are propagated by
eeds, which ſhould be ſown
ch, upon a Bed of light Earth;
when they are come up, they
be tranſplanted out into Nur-
eds, at about eight Inches
r, where they may remain
e Middle of *May*, when they
e taken up, with a Ball of
to their Roots, and planted
Middle of large Borders,
they will flower in *July* and
; and, if the Autumn be fa-
le, will produce ripe Seeds
ne Year. But it is not ad-
e to permit them to ſeed,
often weakens and decays
oots; therefore when their
rs are paſt, you ſhould cut
their Stems, which will
hem to puſh out freſh Heads,
y the Roots will be main-

n the different Varieties of
Plants are intermix'd with
Plants of the ſame Growth,
ake a handſome Appearance
their Seaſon of Flowering,
commonly continues a full
, or more, and renders them
aluable. But as their Roots
abide more than two or
Years, ſo freſh Plants ſhould
s'd from Seeds, to ſupply their Places; for altho' they may be propagated by parting their Roots either in Spring or Autumn, yet theſe ſeldom make ſo good Plants as thoſe obtain'd from Seeds. But the ſixth Sort ſeldom produces any good Seeds, therefore that muſt be propagated in this manner, or by planting Cuttings in the Spring or Summer Months, which will take Root, and make good Plants.

MAUDLIN; *vide* Ageratum.

MAYS; Indian Wheat.

The *Characters* are;

The whole Plant has the Appearance of a Reed: The Male Flowers are produc'd at remote Diſtances from the Fruit on the ſame Plant, growing, for the moſt art, in a Spike upon the Top of the Stalk: The Female Flowers are produced from the Wings of the Leaves, and are ſurrounded by three or four Leaves, which cloſely adhere to the Fruit until it is ripe.

The *Species* are;

1. Mays; *granis aureis. Tourn.* Common Indian Wheat, with yellow Grains.

2. Mays; *granis albicantibus. Tourn.* Indian Wheat, with white Grains.

3. Mays; *granis rubris. Tourn.* Indian Wheat, with red Grains.

4. Mays; *granis violaceis. Tourn.* Indian Wheat, with Violet-colour'd Grains

5. Mays; *minor, granis luteis.* Leſſer Indian Wheat, with yellow Flowers.

6. Mays; *minor, granis rubris.* Leſſer Indian Wheat, with red Grains.

7. Mays; *minor, granis violaceis.* Leſſer Indian Wheat, with Violet-colour'd Grains.

There are ſome other Varieties in the Colour of the Grains of this Plant, which are chiefly occaſion'd by the interchanging of the *Farina* of one Sort with that of another, whereby the Spikes are often of two or three different Colours, as it commonly happens when the ſeveral Colours are planted in the ſame Spot of Ground.

This Plant is ſeldom propagated in *England* but as a Curioſity in ſome curious Gardens; but in *America* it is one of their greateſt Supports, and is there cultivated with great Care, in the following manner:

They dig the Ground well in the Spring, and, after having dreſs'd it well, they draw a Line acroſs the whole Width of the Piece intended to be planted; then they raiſe little Hills of Earth at about three Feet Diſtance, into each of which they plant two or three good Seeds, covering them about an Inch thick with Earth; then they move the Line four Feet farther, continuing to do the ſame through the whole Spot of Ground, ſo that the Rows may be four Feet aſunder, and the Hills in the Rows at three Feet Diſtance. Six Quarts of this Seed is generally allow'd to an Acre of Ground, which, if the Soil be good, will commonly produce fifty Buſhels of Corn.

If, in the planting of this Corn, you obſerve to put the Grains of any one Colour in a Field by itſelf, and no other colour'd Grain ſtand near it, it will produce all of the ſame Colour again, (as hath been affirm'd by ſeveral curious Perſons in that Country): but if you plant them in Rows of the different Colours alternately, they will interchange, and produce a Mixture of all the Sorts in the ſame Row, and frequently on one and the ſame Spike. Nay, it is affirm'd, that they will mix with each other at the Diſtance of three or four Rods, provided there be no tall Fence or Building between to intercept 'em.

There is nothing more obſerv'd in the Culture of this Plant, but only to keep it clean from Weeds, by frequently hoeing the Ground, and, when the Stems are advanc'd, to draw the Earth up in a Hill about each Plant; which, if done after a Shower of Rain, will greatly ſtrengthen them, and preſerve the Ground about their Roots moiſt a long Time.

When the Corn is ripe, they cut off the Stems cloſe to the Ground; and after having gather'd off the Spikes of Corn, they ſpread the Stalks to harden and dry, which they afterwards uſe for covering Sheds, *&c.* for which Purpoſe it is very uſeful to the Inhabitants of the warm Parts of *America*, as alſo for feeding their Cattle, while green, which is what they often uſe, when other Fodder is ſcarce.

But notwithſtanding this Plant at preſent is only cultivated as a Curioſity in *England*, yet it is probable it might be propagated with good Succeſs, and become a Piece of good Husbandry in ſuch Places where *Beans* will not ſucceed, as particularly in light ſandy Lands, (where the Inhabitants are at a great Loſs for hearty Food for their Cattle) upon which this Plant will ſucceed extremely well, and ſupply the Want of *Beans*, perhaps better than any other Plant. The ſmall Sort is what I would recommend to be ſown in *England*, which is what the Inhabitants of *North-America* cultivate; and this will perfect its Seeds in leſs than four Months from ſowing, as I have ſeveral times experienc'd; and even in ſome of the ɑoſt unfavourable Years it has d in full four Months from g.

cultivating this Plant, the nd ſhould be well plough'd reſs'd, and the Rows of Corn l four or five Feet aſunder, bout two Feet aſunder in the s; ſo that with a ſmall Breaſt- the Ground may be often ; whereby the Weeds will be ly deſtroy'd; which, if duly v'd while the Plants are young, will be no occaſion to repeat er they are got up to a Height; hen the Plants will prevent the rth of Weeds, by overſhadow- he whole Ground.

e beſt Time to plant theſe is in the Beginning of *April*, the Weather is ſettled; for if e ſown too ſoon, the cold ts and wet Weather often de- the Seeds; and if it be ſown ate, and the Autumn ſhould bad, it would not ripen

e large Sort, when cultivated Curioſity, ſhould be ſown upon derate Hot-bed in the Begin- f *March*; and in the Middle *pril* they ſhould be carefully planted where they are to re- ; and if the Seaſon proves rable, the Seeds will ripen well: but without being thus rais'd, this Sort ſeldom comes ch in this Country.

EADOW SAFFRON; *vide* nicum.

EDICA; Medick, *or* La Lu-

The *Characters* are;

hath a papilionaceous (or But-) Flower, out of whoſe Empale- riſes the Pointal, which after- s becomes an intorted Pod, ſome- like a Ram's Horn, in which odg'd Kidney-ſhap'd Seeds.

The *Species* are;

1. Medica; *major erectior, floribus purpuraſcentibus. J. B.* Greater Upright *Medick* or *La Lucerne*, with purpliſh Flowers.

2. Medica; *major, erectior, floribus, violaceis. Tourn.* Greater Upright *Medick*, or *La Lucerne*, with Violet-colour'd Flowers.

3. Medica; *major, erectior, floribus luteis. Tourn.* Greater Upright *Medick*, or *La Lucerne*, with yellow Flowers.

4. Medica; *major, erectior, floribus ex violaceo & luteo mixtis. Tourn.* Greater Upright *Medick*, or *La Lucerne*, with Violet and yellow Flowers mix'd.

Theſe Plants do not greatly differ from each other but in the Colour of their Flowers; tho' I think That with the Violet-colour'd Flower produces the largeſt Leaves, and ſtrongeſt Shoots; and That with the yellow Flowers, the ſmalleſt Leaves, and weakeſt Shoots: ſo that the Violet-colour'd Flowering is the beſt Sort to cultivate for Fodder.

This Plant is ſuppos'd to have been brought originally from *Media*, and from thence had its Name *Medica*: It is by the *Spaniards* call'd *Alfaſa*; by the *French*, *La Lucerne*, and *Grande Treſle*; and by ſeveral Botanick Writers it is call'd *Fœnum Burgundiacum*, i. e. *Burgundian Hay*. But there is little Room to doubt of this being the *Medica* of *Virgil*, *Columella*, *Palladius*, and other ancient Writers of Husbandry, who have not been wanting to extol the Goodneſs of this Fodder, and have given Direction for the Cultivation of it in thoſe Countries where they liv'd.

But notwithſtanding it was ſo much commended by the Antients, and hath been cultivated to ſo good

Purpoſe by our Neighbours in *France* and *Switzerland* for many Years, it hath not as yet found Reception in our Country, in any conſiderable Quantity: Tho' it is evident, it will ſucceed as well in *England* as in either of the before-mention'd Countries, being extreme hardy, and reſiſting the ſevereſt Cold of our Climate: Nay, I have had the Seeds which have happen'd to be ſcatter'd upon the Ground in Autumn, come up and endure the Cold of a ſevere Winter, and make very ſtrong Plants.

About the Year 1650, the Seeds thereof were brought over from *France*, and ſown in *England*: but whether for want of Skill in its Culture, whereby it did not ſucceed, or that People were ſo fond of going on in their old beaten Road, as not to try the Experiment, whether it would ſucceed here or not, was the Occaſion of its being intirely neglected in *England*, I cannot ſay. However, I hope, before I quit this Article, to give ſuch Directions for its Culture, as will encourage the People of *England* to make farther Trial of this valuable Plant, which grows in the greateſt Heat, and alſo in very cold Countries, with this Difference only, that in very hot Countries, ſuch as the *Spaniſh Weſt-Indies*, *&c.* where it is the chief Fodder for their Cattle at this time, they cut it every Month, whereas in cold Countries it is ſeldom cut oftner than two or three times a Year. And it is very likely that this Plant will be of great Service to the Inhabitants of *Barbadoes*, *Jamaica*, and the other hot Iſlands in the *Weſt-Indies*, where one of the greateſt Things they want is Fodder for their Cattle; ſince, by the Account given of this Plant by *Pere Fuilleé* it thrives exceedingly in the *Spaniſh Weſt-Indies*, particularly about *Lima*, where they cut it every Week, and bring it into the Market to ſell, and is there the only Fodder cultivated.

It is alſo very common in *Languedoc*, *Provence*, and *Dauphiné*, and all over the Banks of the *Rhone*, where it produces abundantly, and may be mowed five or ſix times in a Year. Horſes, Mules, Oxen, and other domeſtick Cattle love it exceedingly, but above all when it is green, if they are permitted to feed on it; and eſpecially the Black Cattle, which will feed very kindly upon the dry'd Plant; the Exceſs of which is by many People thought to be very dangerous: But it is ſaid to be exceeding good for Milch-Cattle, to promote their Quantity of Milk; and is alſo ſaid to agree with Horſes the beſt of all, tho' Sheep, Goats, and moſt other Cattle will feed upon it.

The Directions given by all thoſe who have wrote of this Plant, are very imperfect, and, generally, ſuch as if practis'd in this Country, will be found intirely wrong; for moſt of them order the mixing of this Seed with *Oats* or *Barley*, (as is practis'd for *Clover*); but in this Way it ſeldom comes up well, and if it does, it will draw up ſo weak by growing amongſt the Corn, as not to be recover'd under a whole Year, if ever it can be brought to its uſual Strength again.

Others have directed it to be ſown upon a low, rich, moiſt Soil, which is found to be the worſt next to a Clay of any for this Plant; in both which the Roots will rot in Winter, and in a Year or two the whole Crop will be deſtroy'd.

But the Soil in which this Plant is found to ſucceed beſt in this Country, is a light, dry, looſe, ſandy

Land, which ſhould be well plough'd and dreſs'd, and the Roots of all noxious Weeds, ſuch as *Couch-graſs*, &c. deſtroy'd, otherwiſe theſe will overgrow the Plants while young, and prevent their Progreſs.

The beſt Time to ſow the Seed is about the Beginning of *April*, when the Weather is ſettled and fair; for if you ſow it when the Ground is very wet, or in a rainy Seaſon, the Seeds will burſt and come to nothing, (as is often the Caſe with ſeveral of the Leguminous Plants) therefore you ſhould always obſerve to ſow it in a dry Seaſon; and if there happens ſome Rain in about a Week or ten Days after it is ſown, the Plants will ſoon appear above-ground.

But the Method I would direct for the ſowing theſe Seeds, is as follows: After having harrow'd the Ground very fine, you ſhould make a Drill quite acroſs the Ground about an Inch deep, into which the Seeds ſhould be ſcatter'd very thin; then cover them over about half an Inch thick, or ſomewhat more with the Earth; then proceed to make another Drill about two Feet from the former, ſowing the Seeds therein in the ſame manner as before, and ſo proceed through the whole Spot of Ground, allowing two Feet Diſtance between Row and Row, and ſcatter the Seeds very thin in the Drills. In this manner, an Acre of Land will require about ſix Pounds of Seeds; for when it is ſown thicker, if the Seed grows well, the Plants will be ſo cloſe as to ſpoil each other in a Year or two, the Heads of them growing to a conſiderable Size, as will alſo the Roots, provided they have Room. I have meaſur'd the Crown of one Root, which was in my Poſſeſſion, eighteen Inches Diameter, from which I cut near four hundred Shoots at one time, which is an extraordinary Increaſe, and this upon a poor, dry, gravelly Soil, which had not been dung'd for many Years, but the Root was at leaſt ten Years old; ſo that if this Crop be well cultivated, it will continue many Years, and be equally as good as when it was firſt ſown, for the Roots do generally run down very deep in the Ground, provided the Soil be dry; and although they ſhould meet a hard Gravel a Foot below the Surface, yet their Roots would penetrate it and make their Way downward, as I have experienc'd, having taken up ſome of them which were above a Yard in Length, and had run above two Feet into a Rock of Gravel, which was ſo hard as not to be looſen'd without Mattocks and Crows of Iron, and that with much Difficulty.

The Reaſon for directing this Seed to be ſown in Rows, is, that the Plants may have Room to grow; and for the better ſtirring the Ground between them, to deſtroy the Weeds, and encourage the Growth of the Plants, which may be very eaſily effected with a ſmall Breaſt-Plough, juſt after the cutting the Crop each time, which will cauſe them to ſhoot again in a very little time, and be much ſtronger than in ſuch Places where the Ground cannot be ſtirred: But you can't pretend to uſe a Plough the firſt Seaſon amongſt it, until the Plants have taken good Root in the Ground; therefore when they firſt come up, the Ground between ſhould be hoed: And if in doing of this you cut up the Plants where they are too thick, it will cauſe the remaining to be much ſtronger. This Hoeing ſhould be repeated two or three times while the Plants are young, according as the Weeds are produc'd, obſerving always to do it in dry Weather, that the Weeds may the better be deſtroy'd, for if it be done in moiſt Weather, they will root and grow again.

With this Management, the Plants will grow to the Height of two Feet or more by the Beginning of *Auguſt*, when the Flowers will begin to appear; at which time it ſhould be cut, obſerving to do it in a dry Seaſon, and keep it often turn'd, that it may ſoon dry, and be carry'd off the Ground, for if it lie long upon the Roots, it will prevent their ſhooting again: After the Crop is taken off, you ſhould ſtir the Ground between the Rows with a Breaſt-Plough, to kill the Weeds and looſen the Surface, which will cauſe the Plants to ſhoot again in a ſhort time, ſo that by the Beginning of *September*, there will be Shoots four or five Inches high; when you may turn in Sheep upon it to feed it down, for it will not be fit to cut again the ſame Seaſon, nor ſhould the Shoots be ſuffer'd to remain upon the Plants, which would decay when the froſty Weather comes on, and fall down upon the Crown of the Roots, and prevent their ſhooting early the ſucceeding *Spring*.

So that the beſt Way is to feed it until *November*, when it will have done ſhooting for that Seaſon: But it ſhould not be fed by large Cattle the firſt Year, becauſe the Roots being young would be in danger of being deſtroy'd either by their trampling upon them, or their pulling them out of the Ground: But Sheep will be of Service to the Roots by dunging the Ground, and they will not eat it too cloſe, ſo as to endanger the Crown of the Roots. The Beginning of *February*, the Ground between the Roots ſhould be again ſtirred with the Plough, to encourage them to ſhoot again; but in doing of this, you ſhould be careful not to injure the Crown of the Roots, upon which the Buds are at that time very turgid, and ready to puſh. With this Management (if the Soil be warm) by the Beginning of *March* the Shoots will be five or ſix Inches high, when, if you are in want of Fodder, you may feed it down till a Week in *April*: After which it ſhould be ſuffer'd to grow for a Crop, which will be fit to cut the Beginning of *June*; when you ſhould obſerve to get it off the Ground as ſoon as poſſible, and ſtir the Ground again with the Plough, which will forward the Plants ſhooting again, ſo that by the Middle or latter End of *July* there will be another Crop fit to cut, which muſt be managed as before: After which, it ſhould be fed down again in *Autumn*, and as the Roots by this time will have taken deep Hold in the Ground, ſo there will be little Danger of hurting them, if you ſhould turn in larger Cattle; but you muſt always obſerve not to ſuffer them to remain after the Roots have done ſhooting, leſt they ſhould eat down the Crown of the Roots below the Buds, which would conſiderably damage, if not deſtroy them.

In this manner you may continue conſtantly to have two Crops to cut, and two Feedings upon this Plant; and in good Seaſons there may be three Crops cut, and two Feedings, which will be a great Improvement, eſpecially as this

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Seeds are ripe; when it muſt be cut, and laid to dry in an open Barn where the Air may freely paſs through, but the Seed muſt be defended from the Wet, for if it be expos'd thereto, it will ſhoot while it remains in the Pod, whereby it will be ſpoil'd: When it is quite dry, it muſt be thraſh'd out and cleans'd from the Husk, and preſerv'd in a dry Place till the Seaſon for ſowing it: And this Seed ſav'd in *England* is much preferable to any brought from Abroad, as I have ſeveral times experienc'd; the Plants produc'd from it having been much ſtronger than thoſe produc'd from *French*, *Helvetian*, or *Turkey* Seeds, which were ſown at the ſame Time, and on the ſame Soil and Situation.

I am inclinable to think, that the Reaſon of this Plant not ſucceeding, when it has been ſown in *England*, has either been occaſion'd by the ſowing it with Corn, with which it will by no means thrive; (for tho' the Plant be very hardy when grown pretty large, yet at its firſt coming up, if it be incommoded by any other Plants or Weeds, it ſeldom does well; therefore it ſhould always be ſown by itſelf, and carefully clear'd from Weeds until it has Strength, after which it is not eaſily deſtroy'd:) Or perhaps People have ſown it at a wrong Seaſon, or in wet Weather, whereby the Seeds have rotted and never come up, which hath diſcourag'd their attempting it again: But however the Succeſs has been, I dare aver, that if the Method of ſowing and managing of this Plant, which is here laid down, be duly follow'd, it will be found to thrive as well as any other Sort of Fodder now cultivated in *England*, and will continue much longer; for if the Ground be duly ſtirred between each Crop, and the laſt Crop fed, as hath been directed, the Plants will continue in Vigour twenty Years or more without renewing, provided they are not permitted to ſeed, which will weaken the Roots more than four times cutting it would do.

The Hay of this Plant ſhould be kept in cloſe Barns, it being too tender to be kept in Reeks open to the Air as other Hay; but it will remain good, if well dry'd before it be carry'd in, three Years. The People abroad reckon an Acre of this Fodder ſufficient to keep three Horſes all the Year round.

MEDICA COCHLEATA; Snail-Trefoil.

The *Characters* are;

Theſe Plants differ from the former in the Fruit, which of theſe Kinds are ſhap'd like a Snail.

There are great Numbers of Sorts of this Plant which are preſerv'd in Botanick Gardens for Variety; but I ſhall in this Place only mention two or three of the moſt curious Sorts, which are cultivated in Gardens for the Oddneſs of their Fruit.

The *Species* are;

1. MEDICA; *ſcutellata. J. B.* The Snail-Trefoil, *commonly call'd in the Seed-ſhops* Snails.

2. MEDICA; *orbiculata. J. B.* Flat, round Snail-Trefoil.

3. MEDICA; *cochleata, ſpinoſa, echinis magnis, utrinque turbinatis, cum ſpinulis reflexis. Raii Hiſt.* Prickly cochleated *Medick*, with a large Head turbinated on every Side with reflex'd Spines, *commonly call'd*, Horns and Hedge-hog.

4. MEDICA; *marina. Lob. Icon.* Sea *Medick* or Snail-Trefoil.

The two firſt Sorts are common in the *Engliſh* Gardens, their Seeds being frequently ſold in the Seed-ſhops in *London*; but the third Sort is pretty rare at preſent in *England*.

The three Sorts may be propagated by ſowing their Seeds upon a warm dry Border the Beginning of *April*, obſerving always to do it in dry Weather; for if the Ground be very wet, or there ſhould happen much Rain ſoon after they are put into the Earth, it very often burſts and deſtroys the Seeds; but if ſome gentle Showers fall about a Week or ten Days after the Seeds are ſown, it will bring up the Plants in a ſhort Time after. When they are come up, they ſhould be carefully clear'd from Weeds, and thinn'd out to about a Foot aſunder or more (for they muſt remain where they were ſown, ſeldom ſucceeding when tranſplanted;) and after this, they will require no farther Care but only to keep them clear from Weeds; and in *July* they will flower, and their Fruit will ripen in a ſhort Time after: When the Plant is in full Beauty, the firſt Sort, at a ſmall Diſtance, will appear as if it had a great Number of *Snails* upon it; and the third Sort, having large rough Heads, will make a very good Appearance: For which ſingular Oddneſs, a good Garden ſhould always have a few Plants of each Sort, eſpecially ſince they require very little Care to cultivate them.

When the Fruit is full ripe, it ſhould be gather'd and laid by in a dry Place for the Seeds, for if they are permitted to remain upon the Plants, and there ſhould Rain happen, the Seeds would ſprout in the Heads, and be deſtroy'd.

The fourth Sort is a perennial Plant, which is preſerv'd by ſuch Perſons as are very curious in collecting great Variety of odd Plants. This may be propagated by ſowing the Seeds, as the former, or by planting Cuttings during any of the Summer-Months, which if water'd and ſhaded, will take Root in a ſhort Time; after which, they muſt be planted in Pots fill'd with light ſandy Earth, and ſhelter'd in Winter under a Hot-bed Frame, where they may have a great Share of free Air in mild Weather, and only require to be skreen'd from hard Froſt. This Plant is preſerv'd for the beautiful Whiteneſs of its Leaves, which when intermix'd with other low Plants, makes a pretty Variety.

MEDICAGO; Moon-Trefoil.

The *Characters* are;

It hath a papilionaceous Flower, out of whoſe Empalement ariſes the Pointal, which afterwards becomes a plain orbiculated Fruit, ſhap'd ſomewhat like a Half-Moon; in which are contain'd Kidney-ſhap'd Seeds.

The *Species* are;

1. MEDICAGO; *annua, trifolii facie. Tourn.* Annual Moon-Trefoil, with the Appearance of Trefoil.

2. MEDICAGO; *Vulneraria facie, Hiſpanica. Tourn.* Spaniſh Moon-Trefoil, with the Appearance of *Vulneraria*.

3. MEDICAGO; *trifolia, fruteſcens, incana. Tourn.* Shrubby Three-leav'd hoary Moon-Trefoil, by many ſuppos'd to be the true *Cytiſus* of *Virgil*.

The two firſt Sorts are annual Plants, which are preſerved in Botanick Gardens for Variety, more than any ſingular Beauty or Uſe: Theſe may be propagated by ſowing their Seeds in the Beginning of *April*, upon a Bed of light Earth, in the Places where they are to remain; for they ſeldom ſucceed when they are tranſplanted; and when they come up, they ſhould be clear'd from Weeds, and thinn'd to the Diſtance of a Foot aſunder; after which, they will require no farther Care, but only to keep them clear from Weeds, and in *July* they will flower, and their Seeds will be perfected in *Auguſt*. The Seed-veſſels of theſe Plants being ſhap'd like Half-Moons, is the only remarkable Difference between them and the *Medica's*.

The third Sort grows to be a ſtrong Shrub, and will riſe to the Height of five or ſix Feet, and may be reduc'd to a regular Head, when it will appear very beautiful: But it ſhould not be cut too often, which would prevent its Flowering; for if the Shoots are permitted to grow without much Trimming, they will produce Flowers moſt Parts of the Year, which, together with the Beauty of its Silver colour'd Leaves, renders it worthy of a Place in every good Garden.

This Plant may be propagated by ſowing the Seeds, either upon a moderate Hot-bed, or a warm Border of light Earth, in the Beginning of *April*; and when the Plants come up, they ſhould be carefully clear'd from Weeds: But they ſhould remain undiſturb'd, if ſown in the common Ground, 'till the *April* following; but if on a Hot-bed, they ſhould be tranſplanted about *Midſummer* into Pots, placing them in the Shade until they have taken Root: After which, they may be remov'd into a Situation where they may be ſcreen'd from ſtrong Winds, in which they may abide 'till the Latter-end of *October*, when they muſt be put into a Frame, in order to ſhelter 'em from hard Froſts; for thoſe Plants which have been brought up tenderly, will be liable to ſuffer by hard Froſts, eſpecially while they are young. In *April* following theſe Plants may be ſhaken out of the Pots, and placed into the full Ground where they are deſign'd to remain, which ſhould be in a light Soil, and a warm Situation, in which they will endure the Cold of our ordinary Winters extremely well, and continue to produce Flowers moſt part of the Year.

Thoſe alſo which were ſown in an open Border may be tranſplanted in the *April* following in the ſame Manner: But in doing of this, you muſt be careful to take 'em up with a Ball of Earth to their Roots, if poſſible; as alſo to water and ſhade 'em until they have taken Root; after which, they will require little more Care than to keep 'em clear from Weeds, and to prune their Heads once a Year, *i. e.* About the Beginning of *July*, in order to reduce them to a regular Figure: But you ſhould never prune them early in the *Spring*, nor late in the *Autumn*; for if Froſt ſhould happen ſoon after they are pruned, it will deſtroy the tender Branches, and, many times, the whole Plant is loſt thereby.

Theſe Plants have been conſtantly preſerv'd in the Green-houſe, ſuppoſing 'em very tender: But I have had large Plants of this Kind, which have remain'd in the open Air in a warm Situation many Years without any Cover, and have been much ſtronger, and flower'd better, than thoſe which were houſed: Though, indeed, it will be proper to keep a Plant or two in Shelter, leſt, by a very ſevere Winter (which ſometimes happens in *England*) the Plants abroad ſhould be deſtroy'd.

They may alſo be propagated by Cuttings, which ſhould be planted in *April*, upon a Bed of light Earth, and water'd and ſhaded until they have taken Root; after which they may be expos'd to the open Air, but they ſhould remain in the ſame Bed till the *April* following before they are tranſplanted; by which Time they will have made ſtrong Roots, and may be remov'd then with Safety to the Places where they are to remain, obſerving (as was before directed) to water and ſhade them until they have taken Root: After which you may train them up with ſtrait Stems, by faſtening them to Sticks, otherwiſe they are apt to grow crooked and irregular; and when you have got their Stems to the Height you deſign them, they may then be reduc'd to globular Heads, and with pruning their irregular Shoots every Year, they may be kept in very good Order.

This Plant grows in great Plenty in the Kingdom of *Naples*, where the Goats feed upon it, with whoſe Milk the Inhabitants make great Quantities of Cheeſe: It alſo grows in the Iſlands of the *Archipelago*, where the *Turks* uſe the Wood of theſe Shrubs to make Handles to their Sabres; and the *Calogers* of *Patmos* make their Beds of this Wood.

This is, as hath been before obſerv'd, by many People ſuppos'd to be the *Cytiſus* of *Virgil*, *Columella*, and the old Writers in Husbandry, which they mention as an extraordinary Plant, and worthy of Cultivation for Fodder; from whence ſeveral Perſons have recommended it as worth our Care in *England*. But however uſeful this Plant may be in *Crete*, *Sicily*, *Naples*, or thoſe warmer Countries, yet I am perſuaded it will never thrive in *England*, ſo as to be of any real Advantage for that Purpoſe; for in ſevere Froſt it is very ſubject to be deſtroy'd, or at leaſt ſo much damag'd as not to recover its former Verdure before the Middle or latter End of *May*; and the Shoots which are produc'd, will not bear cutting above once in a Summer, and then will not be of any conſiderable Length; and the Stems growing very woody, will render the cutting of it very troubleſome: So that upon the Whole, it can never anſwer the Trouble and Expence in cultivating it, nor is it worth the Trial, ſince we have ſo many other Plants preferable to it; though in hot, dry, rocky Countries, where few other Plants will thrive, this may be cultivated to great Advantage, ſince in ſuch Situations this Plant will live many Years, and thrive very well.

But however unfit this may be for ſuch Uſes in *England*, yet for the Beauty of its hoary Leaves, which will abide all the Year, together with its long Continuance in Flower, it deſerves a Place in every good Garden, where being intermix'd with Shrubs of the ſame Growth, it makes a very agreeable Variety.

MEDLAR; *vide* Meſpilus.

MELAMPYRUM; Cow-Wheat.

The *Characters* are;

The Leaves grow oppoſite by Pairs: The Flower conſiſts of one Leaf, is of an anomolous perſonated Figure, and divided into two Lips; the uppermoſt of which has a Spur, but the under one is entire: The Fruit is round, and divided into two Cells, containing Seeds reſembling Grains of Wheat.

The *Species* are;

1. MELAMPYRUM; *luteum, latifolium. C. B. P.* Yellow broad-leav'd Cow-Wheat.
2. MELAMPYRUM; *luteum, anguſtifolium. C. B. P.* Narrow-leav'd Yellow Cow-Wheat.
3. MELAMPYRUM; *Comâ purpuraſcente. C. B. P.* Cow-Wheat, with purpliſh Tops.

The two firſt Sorts are very common in Woods and ſhady Places, growing near the Foot of Trees in divers Parts of *England*, and are never cultivated in Gardens.

The third Sort is very rarely found wild in *England*; but, in *Weſt-Frieſland* and *Flanders* it grows very plentifully among the Corn, and *Cluſius* ſays, it ſpoils their Bread, making it dark, and that thoſe who eat of it, us'd to be troubled with Heavineſs of the Head, in the ſame manner as if they had eaten *Darnel* or *Cockle*; but Mr. *Ray* ſays, He has eat of this Bread very often, but could never perceive that it gave any diſagreeable Taſte, or that it was accounted unwholſome by the Country People, who never endeavour to ſeparate it from the Corn; and *Tabernemontanus* declares, He has often eaten it without any Harm, and ſays, it makes a very pleaſant Bread. It is a delicious Food for Cattle, particularly for fattening of *Oxen* and *Cows*: For which Purpoſe it may be cultivated in the ſame manner as hath been directed for the *Fagopyrum* or *Buck-Wheat*: It loves a light ſandy Soil.

MELIANTHUS; Honey-Flower.

The *Characters* are;

It hath a perennial Root, and the Appearance of a Shrub: The Leaves are like thoſe of Burnet: *The Cup of the Flower is divided into ſeveral Parts: The Flower conſiſts of four Leaves, and is of an anomalous Figure: The Petals (or Leaves) are plac'd ſometimes in the Shape of a Fan, and at other times are of a conical Figure: The Ovary becomes a Fruit reſembling a Bladder four corner'd, divided into four Cells, and pregnant with roundiſh Seeds.*

The *Species* are;

1. MELIANTHUS; *Africanus. H. L.* The large Honey-flower, *vulgarly call'd,* The Locus *or* Wild Honey.

2. MELIANTHUS; *Africanus, minor, fœtidus. Com. Rar.* The ſmaller ſtinking Honey-flower.

The firſt of theſe Plants is pretty common in many *Engliſh* Gardens, where it is preſerv'd as a Curioſity. This produces large Spikes of Chocolate-colour'd Flowers in *May*; in each of which is contain'd a large Quantity of a black ſweet Liquor, from whence it is ſuppos'd to derive its Name.

This Plant was formerly preſerv'd in Green-houſes as a tender Exotick; but, if planted in a dry Soil, and a warm Situation, will endure the Cold of our ordinary Winters very well; and if, in a ſevere Froſt, the Tops of them ſhould be deſtroyed, yet the Roots will abide, and put forth again the ſucceeding Spring, ſo that there is no great Danger of loſing it; and the Plants which grow in the open Air, do always flower much better than thoſe which are preſerv'd in the Green-houſe, as being leſs drawn, which often prevents their producing any Flowers.

This Plant may be propagated by taking off its Suckers or Side-ſhoots any Time from *March* to *September*, obſerving to chuſe ſuch as are furniſh'd with Fibres; and after they are planted, you muſt water, and ſhade them, until they have taken Root, after which they will require no farther Care but to keep them clear from Weeds: They may alſo be propagated by planting Cuttings, during any of the Summer Months; which, if water'd and ſhaded, will take Root very well, and may afterwards be tranſplanted where they are deſign'd to remain.

The ſecond Sort is leſs common than the former, and only to be found in ſome curious Collections of Plants, tho' it ſeems to be equally as hardy as the former. This produces leſſer Spikes of Flowers, but they are much more beautiful than the former, their Flowers having a Mixture of Red, Green and Yellow. This produces its Flowers in *May*, and ſometimes perfects its Seeds with us, by which it may be propagated: And the Plants obtain'd from ſuch Seeds, would be hardier than thoſe which come from Abroad, or are rais'd from Slips. This may be propagated in the ſame Manner as the former, and requires much the ſame Culture, though it is commonly preſerv'd in the Green-houſe; but I have ſeen Plants of this Kind which were growing in the Gardens of *Charles du Bois*, Eſq; at *Mitcham* in *Surrey*, under a warm Wall, which produc'd a greater Quantity of Flowers, and ripened their Seeds better than any of thoſe Plants which were preſerv'd in the Green-houſe. This Sort commonly grows to a greater Height than the former;

ner, and its Branches become more woody.

MELILOTUS; Melilot.

The *Characters* are;

It hath a papilionaceous Flower; out of whoſe Empalement ariſes the Pointal, which afterwards becomes a naked Capſule, that is not hid in the Empalement (as in Trefoil) pregnant with one or two roundiſh Seeds: To theſe Notes may be added, the Leaves grow by Threes on the Footſtalks, and the Flowers are produc'd in a Spike.

The *Species* are;

1. Melilotus; *officinarum, Germania. C. B. P.* Common *Melilot.*

2. Melilotus; *fruticoſa, candida, major, Mor. Hiſt.* Shrubby *Melilot,* with a white Flower.

3. Melilotus; *major, odorata, violacea. Mor Hiſt.* Greater ſweet-ſcented *Melilot,* with a Violet-colour'd Flower, *commonly call'd* Sweet Trefoil, *or* Lotus Urbana.

There are ſeveral *Species* of this Plant, which are preſerv'd in curious Botanick Gardens for Variety; but as they are Plants of little Beauty or Uſe, ſo I ſhall paſs them over without naming. The firſt Sort here mention'd, is that uſed to make the *Melilot Plaiſter:* This is found wild in ſeveral Parts of *England,* but is generally cultivated in ſome Gardens near *London,* from whence the Markets are ſupply'd with it. The ſecond Sort is by ſome ſuppos'd to be only a Variety of the firſt, differing in the Colour of its Flowers; but this is a Miſtake, for the whole Plant has a very different Appearance, the Leaves being narrower, the Stalks much taller, nor has it near ſo ſtrong a Scent. The third Sort is ſometimes uſed in Medicine, but is rarely cultivated except in Botanick Gardens.

Theſe may be all cultivated by ſowing their Seeds in *March,* upon a Bed of light Earth; and when the Plants are come up, they ſhould either be tranſplanted out, or hoed, ſo as to leave 'em eight or ten Inches aſunder (eſpecially the two firſt Sorts, which will abide two or three Years, and grow very large) obſerving to keep them clear from Weeds, and the *Auguſt* following they will flower; when they may be cut for Uſe, which will cauſe them to puſh out new Shoots, whereby the Roots will be maintain'd through the Winter, and flower in *May* or the Beginning of *June* the ſucceeding Year. The cutting off the Shoots when the Plant is in flower, will maintain the Roots much longer than if they were permitted to ſtand till the Seeds are ripe, ſo that thoſe Roots you intend for Seeds, muſt not be depended on to ſtand very long.

The third Sort is an annual Plant, which may be ſown as the two former, but ſhould not be tranſplanted, but rather hoed out to the Diſtance of five or ſix Inches, and permitted to remain in the ſame Place, obſerving to keep them clear from Weeds, and they will flower in *June,* and their Seeds will be ripe in *Auguſt.*

MELISSA; Baulm.

The *Characters* are;

It is a verticillate Plant, with a labiated Flower, conſiſting of one Leaf, whoſe Upper-lip is roundiſh, upright, and divided into two; but the Under-lip is cut into three Parts: Out of the Flower-cup riſes the Pointal, which is attended, as it were, with four Embryo's: theſe afterwards

wards turn to ſo many Seeds, which are roundiſh, and incloſ'd in the Flower-cup. To theſe Notes may be added, the Flowers are produc'd from the Wings of the Leaves, but are not wherled quite round the Stalks.

The *Species* are;

1. Melissa; *hortenſis. C. B. P.* Garden-Baulm.

2. Melissa; *hortenſis, foliis ex luteo variegatis.* Garden Baulm, with yellow variegated Leaves.

3. Melissa; *Romana, molliter hirſuta, & graveolens. H. R. Par.* Stinking Roman Baulm, with ſofter hairy Leaves.

There are ſome other *Species* of this Plant which are preſerv'd in curious Gardens for Variety; but as they are never cultivated for Uſe, ſo I ſhall paſs them by without naming.

The firſt of theſe Sorts is cultivated in Gardens for Medicinal and Culinary Uſe: This is propagated by parting the Roots, either in *Spring* or *Autumn*, planting the Slips at about eight or ten Inches Diſtance, in Beds about four Feet wide, leaving a Path two Feet between the Beds, for the Conveniency of cleaning, watering, and cutting the Plants.

When they are firſt planted, if the Seaſon proves dry, you muſt carefully water them until they have taken Root, otherwiſe they will be ſubject to decay, but afterwards they will require no farther Care, but only to keep them clear from Weeds. Theſe Plants ſhould be tranſplanted and parted every other Year, otherwiſe their Roots will grow ſo large as to injure each other, and for want of Room will rot and decay.

The variegated Sort makes a very pretty Appearance in the *Spring* Seaſon, while the Leaves are young, but afterwards their Beauty goes off; however, a few Plants of this Sort may be planted in large Borders for Variety.

The third Sort is a Plant of no great Beauty or Uſe, but is preſerv'd in ſeveral curious Gardens for Variety. This is ſomewhat tender, and ſhould have a dry Soil and a warm Situation, otherwiſe it is ſometimes deſtroy'd in ſevere Froſts.

The two firſt Sorts will grow in almoſt any Soil or Situation; but the ſtrip'd Sort ſhould not have a rank Soil, which would cauſe it to grow vigorouſly, whereby the Beauty of its variegated Leaves ſoon goes off.

MELISSA TURCICA; *vide* Moldavica.

MELO; A Melon.

The *Characters* are;

The Flower conſiſts of one Leaf, which is of the expanded Bell-ſhape, cut into ſeveral Segments, and exactly like thoſe of the Cucumber: Some of theſe Flowers are barren, not adhering to the Embryo; others are fruitful, growing upon the Embryo, which is afterwards chang'd into a Fruit, for the moſt part of an Oval-ſhape, ſmooth or wrinkled, and divided into three ſeminal Apartments, which ſeem to be cut into two Parts, and contain many oblong Seeds.

The *Species* are;

1. Melo; *vulgaris. C. B. P.* Common Musk *Melon.*

2. Melo; *rotundus, parvus. C. B. P.* Small round Musk *Melon, commonly call'd,* The Portugal or Pocket *Melon.*

3. Melo; *reticulatus. J. B.* Netted or wrought *Melon.*

4. Melo; *magnus, cortice virente, ſemine parvo. J. B.* Greater Musk

with a ſmooth green Skin,
mall Seed.
ELO; *Hiſpanicus, cortice al-*
us rubente. White Spaniſh
vulgò.
ELO; *cortice lævi, intus vi-*
The Green fleſh'd *Melon*;

e are ſeveral other Varie-
Melons which are annually
t into *England*; but as ma-
hem are only accidental Va-
s, and ſeldom continue to
e the ſame Kinds from Seed
ſo it would be to little Pur-
o enumerate them in this

here is not any Plant culti-
a the Kitchen-Garden, which
rdeners near *London* have a
Ambition to produce early
Plenty; ſo there is a great
er of Methods now practis'd
raiſing and dreſſing of the
in order to obtain them in
Perfection: But to enume-
em all in this Place, would
exceed my intended Bounds,
re I ſhall only ſet down the
nd eaſy Method, whereby a
may depend on having a
Crop of *Melons* whenever the
is tolerably good for them,
ed the Seed be good, and the
ions duly follow'd.
l firſt, as to the Choice of Seed:
you muſt be careful, becauſe
hole Succeſs of your Labour
xpence depends upon it. You
annually (if poſſible) exchange
Seeds, and not continue to
nd ſow the ſame for ſeveral
in the ſame Ground, for they
ertainly degenerate in two or
Years, and from being extra-
ry good Sorts, will become
bad; therefore you ſhould
aſe ſome good *Melons* from
Gardens at a great Diſtance
from you; which Seed (provided the Fruit was well-taſted, high-colour'd, and of a firm Nature) ſhould be carefully preſerv'd two or three Years before it be ſown, when it will not be ſo ſubject to produce ſtrong luxuriant Vines, but will be more productive of Fruit, (for as I have obſerv'd, that by keeping theſe Seeds, they annually loſe of their Weight; ſo it is certain, that the watery Parts do firſt evaporate; and theſe are what promote Luxuriancy in all Plants, therefore the more of theſe are loſt by keeping, *&c.* the more fruitful will the Plants be): but it muſt be obſerv'd, that although theſe Seeds will retain their growing Quality for eight or ten Years, yet they are not near ſo good at that Age (whatever may have been ſaid to the contrary); for the Plants produc'd from ſuch Seeds are generally too weak to produce Fruit of any conſiderable Size, and Seed of three or four Years old is by the beſt Judges always preferr'd.

But if you cannot obtain Seeds of that Age, and are oblig'd to ſow new ones, then you ſhould either carry it in your Breeches Pocket, where it may be kept warm, or plac'd at a proper Diſtance from a Fire two Months before it be ſown; by which means the watry Parts will be carry'd off, and the Seed prove equally as good as if it had been kept two or three Years, as hath been experienc'd by ſeveral curious Perſons.

There are commonly great Quantities of *Melon* Seed brought into *England* annually as great Curioſities, which often tempts the Gardeners to ſow it, expecting ſomething very extraordinary from it; but it ſeldom happens that it ever proves good, therefore great Care ſhould be taken to know from whence it comes; by which may be gather'd how proper it is for our Climate, and alſo ſome Judgment made of the Goodneſs of the Sorts: For thoſe *Melons* which are produc'd in the *Weſt-Indies*, are generally very large, and being brought from a very hot Country, ſeldom come to any thing in *England*; and thoſe Seeds which come from *Spain*, *Italy*, or the *Levant*, are ſeldom good for much, the Gardeners in thoſe Countries being very careleſs in ſaving their Seeds: But the beſt Country to procure *Melon* Seeds from, is *Languedoc* in the South of *France*, where the Gardeners emulate each other in producing the fineſt *Melons*, and the Seeds brought from thence are much preferable to any ſav'd in *England*, and do ſucceed better than thoſe brought from moſt other Countries.

Having thus largely treated of the Choice of Seeds, I ſhall now proceed to the Method and Times of ſowing them; which, according to the common Practice of the Gardeners near *London*, is at two Seaſons, *viz.* The firſt, (which is for the early Crop, to be planted under Frames) in the latter End of *January*, or the Beginning of *February*; tho' indeed there are ſome who, endeavouring to produce early Fruit, ſow their Seeds in *December*, but then there muſt be a great Expence and Care, otherwiſe they will come to nothing: So that the moſt certain Seaſon is that before-mention'd; for if by great Care the Plants which are rais'd ſooner are preſerv'd in Health, yet when the Fruit firſt appears, if the Beds are not in good Temper for Heat, and great Care be not taken in giving them a juſt Proportion of Air, the Fruit will fall off and come to nothing. The ſecond Seaſon for ſowing this Seed (which is for Bell or Hand-Glaſſes) is about the Beginning of *March*, or a little later, according to the Earlineſs or Lateneſs of the Seaſon; and is the general Crop of *Melons* which are commonly ripe in *July* or *Auguſt*: But I ſhall firſt begin with Directions for Raiſing and Managing the early Crop for Frames.

About ſeven or eight Days before you intend to ſow the Seeds, you muſt prepare a Parcel of new Horſe-Dung from the Stable, which ſhould be caſt up (together with the Litter) into a round Heap, mixing therewith a few Sea-Coal Aſhes, which will help to preſerve the Heat of the Dung. After it has lain in the Heap a Week, it will have acquir'd Heat enough for the Purpoſe: You muſt therefore dig a Trench the Length and Width of the Frame you intend for the Bed, and about a Foot deep, (provided the Ground be dry; but if it be wet, the Trench ſhould not be above three or four Inches deep); into this Trench you muſt lay the Dung, obſerving to ſhake and work it well with the Fork, ſo that every Part of it may be equally ſtirr'd, whereby it will ſettle all alike; and it ſhould be beaten down with the Fork, to prevent the Heat from going off too ſoon: This Dung ſhould be laid three Feet thick; and after having made it exactly level on the Top, you ſhould lay ſome fine light Earth thereon, about three Inches thick, on which the Seeds ſhould be ſown two Days after the Bed is made, covering it about half an Inch with the ſame light Earth. If after the Seed be ſown, the Bed ſhould prove very hot, you muſt raiſe the Light with a Stone about an Inch high, which will make Way for the Steam of the Bed to paſs off: But if it ſhould prove cool, you muſt lay ſome Litter about the Sides, and cover the Glaſs well with Mats or Straw every Night, and in bad Weather, which will ſoon bring it to a Heat. In about five Days after the Seed is ſown, the Plants will appear above-ground; when you muſt carefully give them Air, to prevent their being ſuffocated by the Steam of the Bed, as alſo turn the Glaſs every Day, when the Weather is fair, to dry off the Damp which ſettles upon the Glaſs; and if the Weather ſhould not admit of the Glaſs lying the wrong Side upwards to dry, then you muſt only turn it, and wipe off all the Moiſture with a woollen Cloth, and turn the Glaſs again; for if the Moiſture, which is collected upon the Underſide of the Glaſs, be ſuffer'd to fall upon the Plants, it will occaſion their changing yellow, and cauſe them to be very weak; for this proceeds from the Steam of the Dung and Earth, and the Perſpiration of the Plants, which being confin'd and mix'd together, becomes of a rancid Nature, and ſo proves deſtructive to whatever Plants it lodges upon, or that imbibe any Part of it.

You ſhould alſo, ſo ſoon as the Plants appear, caſt up a freſh Heap of new Dung, as before; and after having lain in the Heap about ſix Days, you may make a new Bed in the Manner before directed, covering the Dung three Inches thick with good freſh light Earth; then put on the Frame and Glaſſes, and let it remain two or three Days for the great Heat to paſs off before you ſet the Plants therein, that the Bed may be of a moderate Temper, otherwiſe the Roots of the Plants will burn: When you find your Bed of a proper Temper for Heat, which you may eaſily know, by thruſting your Finger down in the Earth, letting it remain a ſmall Time, and if you feel no violent Heat, then you may be ſure there will be no Danger of injuring them thereby: Therefore you ſhould take up the Plants carefully out of the Seed-bed, (raiſing them with your Finger, that the Roots may not be injur'd) and prick them into the new Bed, about three Inches Diſtance each Way, covering the Glaſſes with Mats, if the Sun ſhould be warm, till they have taken Root, after which you muſt be very careful to give them Air in Proportion to the Heat of the Bed, otherwiſe they will draw up very weak, and change yellow: You muſt alſo, as the Stems of the Plants advance in Height, put in ſome dry freſh Earth between them, to earth the Shanks, which will greatly increaſe their Strength; and be very careful to wipe the Moiſture off from the Glaſſes, as was before directed, for the Reaſons already laid down; and proportion your Covering of Mats every Night to the Heat of the Bed.

In about a Fortnight after the Plants are prick'd out, they will begin to ſhew the third (or what, in the Gardeners Language, is call'd the rough) Leaf; at which time you muſt be provided with a freſh Parcel of new Dung in Proportion to the Quantity of Holes you intend to plant, allowing a full Load (which commonly contains fourteen good Wheel-barrows) to each Hole: When the Dung has lain in the Heaps ſix or eight Days, you muſt dig out a Trench in Proportion to the Length and Breadth of your Frames, and about a Foot deep, if the Soil be dry, but if wet, four or five Inches will be ſufficient: Then wheel the Dung therein, obſerving to ſhake and work it equally in every Part of the Bed, that the Heat may be equal; and after having laid it even and level, you ſhould lay on the Earth (obſerving to break it very fine) about three Inches thick, laying it exactly even; then put on the Frames, and in the Middle of each Light, where the Plants are to be planted, you ſhould put a good Basket full of freſh, light, rich Earth, raiſing it into a little Hill; then cover the Beds with the Glaſſes, letting it remain two or three Days, till you perceive it is of a proper Temper for Heat; when you muſt take the Plants carefully out of the former Bed, and after having levell'd the Hills in the Middle of each Glaſs on the Top, and made it a little hollow, to contain a ſmall Quantity of Water, you ſhould ſet two ſtrong Plants into each, obſerving to give them a little Water if the Earth be dry, as alſo to ſhade them from the Sun until they have taken Root; after which you muſt be careful to give them Air, according to the Proportion of the Heat of the Bed, as alſo to turn the Glaſſes to dry them: And when the Plants have put out the fourth Leaf, (which is what the Gardeners term having two Joints) you ſhould pinch off the extreme Part of the Shoot, in order to force out lateral Branches or Runners; which when they have produc'd about ſix Inches long, ſhould be regularly plac'd in the manner they are deſign'd to remain; for theſe Shoots ought never to be diſplac'd, or the Leaves bruis'd with the Hand, which is very injurious to them; therefore you ſhould conſtantly keep them clear from Weeds, and as the Shoots are produc'd, lay them in their true Order ſo as not to croſs or entangle with each other, but by no means ſhould you ſtop them, as is too often practis'd, which occaſions their putting forth a greater Number of Shoots, but then they are the weaker, and ſo there is a Confuſion of Vine, but thoſe not ſtrong enough to produce any conſiderable Fruit, nor will the firſt *Melons*, which appear upon ſuch Vines, remain, but, on the contrary, fall away, and come to nothing.

Theſe Plants ſhould be often refreſh'd with Water, but you muſt be careful not to give them too much; and when the Vines have grown off from the little Hill upon which they were planted, you ſhould water them gently all over their Leaves, which will greatly refreſh them, but you ſhould be careful not to do this in the Heat of the Day, leſt the Sun, by immediately exhauſting the Moiſture, ſhould ſcorch the Leaves of the Plants; nor ſhould it be done late in the Evening, for the Glaſſes being then put down cloſe, and cover'd with Mats or Straw, the Moiſture which always ariſes after ſuch Waterings, where there is a Warmth in the Beds, being pent in, will become rancid, and mixing with the Air, will occaſion its being hurtful to the Plants, therefore the beſt Time is about ſeven or eight of the Clock in the Morning, according to the Seaſon of the Year; and when you find the Sun ſhines hot upon the Glaſſes, you ſhould raiſe them, to let the Steam paſs off, and in the Middle of the Day, in very hot Weather, the Glaſſes ſhould be ſhaded with Mats or Straw, which will prevent their ſcorching, and preſerve a gentle Moiſture in the Bed, which is abſolutely neceſſary for the Growth of

n your Fruit begins to appou will at the ſame Time re a great Number of Male rs (which the Gardeners call loſſoms, and are eaſily diſtin- from the fruitful ones, by eing produc'd upon a ſlender e, whereas the fruitful ones vays faſten'd to the Top of oung Fruit) : Theſe are by Perſons carefully pick'd off, poſing that they weaken the and are injurious to the Fruit; but this is a very Miſtake, (as I have more than xperienc'd) for they are aby neceſſary to impregnate the of the fruitful Flower : h when done, the Fruit will ſwell and grow large; but if e obſtructed, they ſeldom come y thing, but on the contrary, e yellow, and fall off: There- I would caution every one ſt the nice pruning of *Melons*, ich they are ſo liable to com- Miſtakes; whereas on the con- when they never do any more but only ſtop the firſt g Shoots, to encourage their cing ſtrong Runners, there is anger of miſcarrying, if the s are but kept clear from ls, and not tumbled or bruiſed, arefully attended with Water, then the natural Growth of Plants not being obſtructed, you not fear Succeſs.

ring the Growth of the *Melons* ſhould conſtantly attend them Water, being cautious not to them too much; but when Fruit is arriv'd to a conſiderable eſs, you ſhould intirely forbear ring them, or at leaſt do it ſparingly, for the Water which en given them, does but contribute to the making them large and ill-taſted, which ſhould always be avoided, for a middle-ſiz'd well-taſted Fruit is far preferable to the moſt monſtrous, watery, green, ill-taſted *Melon* that was ever produced.

When the Fruit begins to ripen, (which you may know by the changing its Colour, and emitting an Odour when cloſely ſmell'd to) you ſhould turn it every Day, that every Side of the *Melon* may be expos'd to the Sun, that it may be equally ripen'd on all Sides: And if you intend to eat it ſoon after it is gather'd, you ſhould let it remain upon the Vines until it changes pretty yellow, and the Stalks ſeem to ſeparate from the Fruit; then you ſhould cut it off in the Morning before the Sun is too hot, obſerving to preſerve two Inches of the Stalk to the Fruit, otherwiſe it will loſe of its Richneſs: But when the Fruit is to be ſent to any Diſtance, ſo that it will be two or three Days before it is eaten, then you muſt obſerve not to let it be too ripe before it be cut, for it will be little worth, after being kept two or three Days.

If the above-mention'd Directions be duly obſerv'd, you will not have Occaſion to pull off the Leaves from the Vines, to admit the Sun to the Fruit, as is often practis'd, though very abſurdly, for the Fruit will always thrive much better where it has a gentle Coverture of Leaves, than where it is too much expos'd to the Sun, which hardens the outer Skin, and prevents its kindly Growth whereby it is render'd tough and ill-taſted.

But notwithſtanding I have adviſ'd the planting out the *Melon* Plants upon the Hills in the Middle of each Glaſs, yet if any Perſon is very curious to have early Fruit, the beſt Method is to plant them in Baskets, (in the Manner as was directed for *Cucumbers*, under which Head you will find proper Inſtructions how they are to be manag'd until they are ridg'd out into the Frames for good, which ſhould not be done till the Flowers begin to appear); after which the Management muſt be the ſame as hath been before inſerted, both as to Pruning, Watering, *&c.* therefore I ſhall forbear repeating either of thoſe Articles in this Place, but ſhall now proceed to the Method practis'd by the moſt skilful Gardeners, for the ſecond or general Crop of *Melons* which are rais'd commonly under Bell or Hand-Glaſſes.

The Seaſon for ſowing the Seed for this Crop, is (as I before mention'd) about the Beginning of *March*, and may be put into the Upper-ſide of the Hot-beds where your early *Melons* or *Cucumbers* are planted, in which Place they will ſoon come up, and may then be taken up and tranſplanted into a new Hot-bed, and cover'd either with Hand-glaſſes or Frames, (according as you have Conveniency) obſerving to refreſh 'em with Water, as alſo to ſhade them, until they have taken Root; after which, you muſt let 'em have a great Share of freſh Air when the Weather is good, that the Plants may grow ſhort and ſtrong; and obſerve to earth up their Stems, as they advance, with light Earth, which will greatly encourage the Plants.

About the Beginning of *April* the Plants will put out their rough Leaves, at which Time you ſhould be provided with a Quantity of new Dung, in Proportion to the Number of Holes intended, (always allowing a good Load of Dung to five Holes, which is the common *Quantum*) which ſhould be caſt into a Heap for ſix or ſeven Days, mixing therewith a few Sea-coal Aſhes; and when the Dung is in a proper Temper for uſing, you muſt dig out a Trench, the Length whereof ſhould be according to the Number of Glaſſes you intend in each Row, allowing them three Feet Diſtance, and in Width two Feet and an Half: But the Depth muſt be proportion'd to the Moiſture or Dryneſs of the Soil; in a dry one it ſhould be ten Inches deep, but in a moiſt Soil two or three Inches will be enough; then you muſt wheel the Dung therein, obſerving to ſhake and work every Part of it equally, and to lay it of an equal Thickneſs, as alſo to make the Sides ſtrait: Then having laid the Dung even, you muſt mark out the Places intended for the Holes, at each of which you muſt lay a Basket full of freſh light rich Earth, thruſting a Stick about two Feet long into the Middle, which muſt remain for a Mark where the Hole is to be made; then cover the Dung all over, both Top and Sides, with the Earth that came out of the Trench, laying it exactly ſmooth and even, about three Inches thick, or ſomewhat more: Then put the Glaſſes on over each Stick, letting 'em remain cloſe down two Days, by which Time the Dung will have warm'd the Earth ſufficiently to receive the Plants: You ſhould therefore draw out the Sticks, and with your Hand level the Top of the Hill, breaking the Clods, and laying it hollow like a Diſh, to retain the Water given to them; then take the Plants up carefully from the other Bed, and put two ſtrong ones into each Hole, obſerving to water and ſhade 'em until they have taken Root.

Thus having made one Ridge, you may continue to make as many more as you have Glaſſes for, allowing ſix Feet between each Ridge for a Path to go between them; which, at the firſt making the Ridges, may ſeem a great deal, yet after the Vines have run, and the Sides of the Ridges made up to ſupport 'em, there will not be above two Feet left for a Path, which is as little as can well be allow'd.

Your Plants having made new Roots, and put out a fourth Leaf, you ſhould nip off the Top of each, to force out Runners from the Bottom (as was before directed for thoſe in Frames;) and as the Weather increaſes warm, ſo you ſhould always raiſe up the Glaſſes on the South-ſide with Stones, in the Middle of the Day, to give 'em Air, which will cauſe 'em to be very ſtrong; and alſo give them a little Water twice a Week, if the Weather be good; but don't give 'em too much at each Time, leſt you thereby canker and rot their Roots.

About the Middle of *May*, or ſooner (according as your Plants have thriven) their Runners will have grown ſo as to cruſh againſt the Glaſſes on every Side; therefore you ſhould place three Bricks under each Glaſs at Right Angles, upon which the Glaſſes ſhould be ſet, ſo that there may be a Hollow under each of about two Inches, or leſs, which will be ſufficient to admit the Runners out; then you ſhould gently lead them from under the Glaſſes, putting each in its right Poſition, ſo that they may not croſs or intangle with each other; to prevent which, you ſhould have ſome ſmall forked Sticks (ſuch as are commonly uſed in laying *Carnations*) with which you ſhould gently peg down each ſtrong Runner, which will prevent their being diſplac'd by the Wind, or any other Accident. But you muſt obſerve, if the Nights prove cold after they are let out from under the Glaſſes, to cover 'em with Mats; otherwiſe the Ends of the Shoots will ſuffer by the Cold, to the no ſmall Injury of the Plants: You muſt alſo obſerve to refreſh 'em with Water (as before;) but forbear all other pruning or handling them, for the Reaſons before laid down.

When the Vines have extended themſelves to the Sides of the Ridges, you ſhould dig up the Ground on each Side about two Feet wide, laying therein ſome old rotten Horſe-dung, covering it with the Earth, ſo as to raiſe it even with the Top of the Ridges, whereby they will be widened near four Feet; and ſo the Vines will have Room to run on each Side, without hanging down from the Ridges; and the old Dung which was laid on each Side will be of great Service to the Roots. After having made up the Ridges in this manner, you muſt gently lay out the Shoots thereon, being careful to train 'em in their proper Order, ſo as not to croſs each other: You muſt alſo carefully clear 'em from Weeds; but be very careful that you do not bruiſe or break the Leaves with your Hands; and then ſet the Glaſſes on again over the Roots, where they may remain unremov'd during the Continuance of the Plants: For after this, all the Water which is given to 'em muſt be gently ſprinkled all over the Plants; and it's no matter whether any of it falls cloſe to the Stems: But, on the contrary, the drier they are preſerv'd, the greater Vigour they will have; for the Roots, which are the chief Support of 'em, are at this Time at a much greater Diſtance from the Hole, and will receive the Benefit of the Water much better, when given all over the Top of the Ridges.

When your *Melons* begin to appear upon the Vines, if the Seaſon ſhould be very hot and dry, you ſhould pour down the Water in the Paths between the Ridges, which will ſoak in and ſupply the Roots with Moiſture; and at that Seaſon, the Water which is given all over the Plants ſhould be but little, and given to them very gently, leſt by the Violence of the Water you injure the tender Fruit: But after they are grown as large as your Thumb, they will be almoſt out of Danger, tho' then it will be adviſeable to give them but gentle Refreſhings over the Vines; but this may be repeated two or three times a Week, according to the Heat of the Seaſon, obſerving always to do it in the Evening, that it may have Time to ſoak in before the Sun comes on to exhale the Moiſture. As to the pruning of them, I would (as I before ſaid) adviſe never to be buſy in that, ſince the more exact you are in that, the more likely you are to do hurt, therefore you need do no more than only keep the Vines clear from Weeds, and train them in regular Order.

When the Fruit is about the Bigneſs of a Tennis-Ball, you ſhould place a thin Piece of Tile under each, to raiſe them from the Ground, otherwiſe they are very apt to rot (eſpecially if the Seaſon ſhould prove moiſt) or at leaſt to receive Damage on the Underſide; and when the *Melons* are full grown, you ſhould forbear watering them; and if the Weather be cold, you ſhould place Glaſſes over them, which will greatly accelerate their Ripening, and cauſe 'em to be better taſted: You ſhould alſo turn the Fruit two or three times as it is ripening, that every Part may be equally ripened; and in cutting them, you ſhould obſerve the Directions before laid down.

In ſaving the Seeds, you ſhould be careful to take them from ſuch Fruit as are well ripened, of a firm Fleſh, and well-taſted, ſuffering it to lie in the Pulp ſpread upon a Paper four or five Days before it be waſh'd out; then you muſt dry it, and put it up for Uſe, always obſerving to title each Sort, and add the Year it was ſaved.

The beſt Sorts for Frames, are the *Black Galloway*, and the *ſmall Portugal Melons*, which ripen early, and do not produce ſo ſtrong Vines as the larger Sorts, which require more Room than can be allow'd them in Frames.

Of late Years, there has been a Method of raiſing the general Crop of *Melons* under oiled Paper, inſtead of Bell or Hand-Glaſſes, which has ſucceeded ſo well, as to be now very commonly practis'd in the Gardens near *London*; but this Method being at preſent unknown to Perſons who reſide in the Country, I ſhall inſert it in this Place. The Manner of raiſing the Plants, as alſo of making the Ridges, being the ſame as for Hand-Glaſſes, I ſhall not repeat either, but proceed to give Directions for preparing the Papers. You muſt provide your ſelf with a Quantity of ſtrong Cap Paper, nine Sheets of which muſt be allowed to each Hole of *Melons*. Theſe nine Sheets of Paper muſt be join'd together with Paſte (which, when done, will ſpread the Width of a common Mat, which is uſed for Covering.) When the Paſte is dry, the Paper ſhould be ſpread on a Board, or hung againſt a Wall, and with a Bruſh ſhould be rubb'd over with Oil, which need be done but on one Side, for the Oil will ſink thro' the Paper, if it be only lightly bruſh'd over; then the Papers ſhould hang out till they are dry, after which they may be uſed for covering your *Melon* Plants. Theſe Papers ſhould be prepared before you plant out your Plants into the Holes, that they may be ready to cover them, which may be performed in the following Manner; *(viz.)* After the Ridges are made, you muſt procure ſome ſmall Hoops, or ſlender Withys, which ſhould be thruſt into the Ground on each Side of the Ridge, and arched over in the ſame manner as is practis'd for covering Flower Beds, then the Papers may be laid over the Hoops, *&c.* and faſten'd down at each End with a Cord, or a few large Stones or Bricks laid upon their Ends, to prevent the Winds from blowing them off. Theſe Papers ſhould be kept cloſe over the Plants while they are young, or in bad Weather; but when the Plants have obtain'd Strength, and the Weather is favourable, they ſhould be rais'd on one Side to admit Air to the Plants; and in ſoft Rains, they ſhould be taken quite off, that the Plants may enjoy the Benefits thereof. Theſe Papers may continue over the Plants, throughout the Seaſon, obſerving only to take 'em off in ſoft Rains, and admit Air under 'em in warm Weather, to the Plants, as was directed; the Plants will thrive much better under theſe, than under Glaſſes; for the Rays of Light will be more equally admitted thro' the Paper when oiled, than thro' a Glaſs, which collects the Rays, and thereby occaſions too great a Heat in Summer under them, than moſt Plants can endure. So that Plants under Glaſſes, are ſubject to Danger, from the great Inequality of Heat; whereas thoſe under Papers, enjoy a more equal Degree, and hereby the Plants are continued much longer in Vigour, as I have always obſerved thoſe under Papers in great Health, when thoſe under Glaſſes have been decayed, tho' they were in the ſame Situation, and under the ſame Management.

Tho' I have directed the making of the Ridges after the ſame manner as for Hand-Glaſſes, yet there are ſome Perſons, who only dig Holes in the Ground at proper Diſtances, into each of which they put two Barrows full of Hot-dung, covered over with the Earth taken out of the Holes, into which they plant their *Melon* Plants; then arch over each Hole with a few ſlender Wands, covering 'em with the Papers, and managing them as hath been directed, in which Method I have obſerved they have had a prodigious Crop of *Melons*, with a much leſs Expence than uſual.

N. B. Theſe oiled Papers will laſt one whole Seaſon very well, ſo that the Expence of Paper and Oil, will amount to Three-pence Half-penny for each Hole.

MELOCACTUS; Melon-Thiſtle.

The *Characters* are;

The whole Plant hath a ſingular Appearance, is very ſucculent, and hath many Angles, which are beſet with ſharp Thorns; the Flower conſiſts of one Leaf, is tubuloſe and Bell-ſhap'd, divided into ſeveral Parts at the Top, and hath many Stamina or Threads; the Ovary becomes a ſoft fleſhy Fruit, containing many ſmall Seeds.

The *Species* are;

1. MELOCACTUS; *India Occidentalis. C. B. P.* The common or large *Melon-Thiſtle, commonly call'd* Turk-Cap *or* Pope's-Head in the *Weſt-Indies.*

2. MELOCACTUS; *Americana, minor. Boerh. Ind.* The leſſer *Melon-Thiſtle,* or ſmall Turks-Head.

There are ſeveral other Sorts of this Plant in the *Weſt-Indies,* but the two here mention'd are all the Sorts which I have yet ſeen in the *European* Gardens.

Theſe Plants are Natives of the Rocks in the *Weſt-Indies,* where they are thruſt out from the Apertures thereof, and can receive but little Nouriſhment from the Soil; nor will they thrive when tranſplanted into another Situation, tho' it be in the ſame Degree of Heat, unleſs the Place be rais'd above the Level of the Ground with Stones and Rubbiſh.

The great Sort (which is very plenty in *Jamaica* and the other Iſlands in the *Weſt-Indies)* is brought into *England* very often, but it rarely happens that they arrive here in perfect Health; for the People who bring them over, ſuppoſe they can't live without Moiſture, which they ſeldom fail to ſupply all the Plants they bring over with, whereby they are rotted and deſtroy'd; and although theſe Plants do not preſently ſhew the Damage they have ſuſtain'd in their Paſſage, yet they ſeldom continue long before they periſh: Therefore the beſt Method to bring them over, is to take them up intire from their Places of Growth, and pack them up in a large Box, with dry Hay or Straw, ſo that they may not wound each other in their Paſſage, obſerving to place them where neither Moiſture nor Vermin can come to them, in which Way they will arrive in perfect Health; but the Perſons who get them, ſhould never chuſe the oldeſt Plants, but rather ſuch as are young and thriving, which are the moſt likely to continue any time with us.

But if they are brought over planted in Tubs, then the beſt Method is to fill the Tubs with Rubbiſh, and ſet the Plants therein, obſerving never to give them any Water during their Paſſage, nor ſuffer them to receive Wet, which will certainly damage them: And when they arrive in *England,* they ſhould immediately be taken out of the Tubs, and planted into Pots fill'd with Lime-Rubbiſh and Sea-Sand intermix'd, and the Pots plung'd into a Hot-bed of Tanners Bark, to facilitate their taking Root: In which Bed they ſhould remain until the Beginning of *October,* when they muſt be remov'd into the Stove, obſerving to place them in the warmeſt Situation, and be very careful not to let them have the leaſt Moiſture during the Winter-ſeaſon, which will infallibly rot them. In the *Spring* of the Year, they may be remov'd out of the Stove into the Bark-bed again, at the ſame Seaſon when the *Anana's* are taken out, and ſhould be plac'd in ſuch a Frame where they will only require a little Air in very hot Weather, but ſhould be water'd very ſparingly, for the Moiſture which ariſes from the Tanners Bark will be almoſt ſufficient for them.

This Plant is not very eaſy to increaſe in this Country, though I have ſeen ſome young ones that were produc'd from Seeds which ripen'd in *England:* Theſe Seeds were ſown upon a Pot of Lime-rubbiſh, and but gently cover'd with the ſame Mixture of Lime-rubbiſh and Sand (as was before order'd for theſe Plants) and the Pots plung'd into a Hot-bed of Tanners Bark, where the young ones began to appear in about ten Weeks after ſowing, and by careful Management were preſerv'd: But theſe Plants being of very ſlow Growth, do not arrive to any Magnitude in leſs than four or five Years, which renders this Method very tedious, and as it is not a very ſure one, ſo 'tis ſeldom practis'd in *England.* I have alſo made Uſe of another Method, which has ſucceeded very well; *i. e.* when the Cap or Crown, which is produc'd on the Top of the Plant, has been injur'd, it occaſions the Plant to ſend out many Side-heads, ſeveral of which I have taken off, and planted in Pots fill'd with Lime-rubbiſh and Sea-ſand, plunging the Pots into a Hot-bed, and they have taken Root very well, and in one Year's time have made very handſome Plants, but theſe Heads ſhould not be planted immediately after they are taken from the old ones, for the wounded Part will be apt to rot, therefore you ſhould lay them by in a warm Part of the Stove for about a Fortnight; in which time the wounded Part will heal over, and they may then be planted without Danger: But you muſt obſerve to keep them very dry, otherwiſe they will rot in a ſhort time.

The ſmaller Sort is not ſo common in *England*, which is occaſion'd by its being very rare in our *American* Settlements, this being originally brought from the *Spaniſh Weſt-Indies*, where is a great Number of other very ſtrange Sorts.

This is only propagated by Seed, which is produc'd in great Plenty every Year from old Plants. The Fruit of this Kind is not thruſt out from the Top of the Plant, as in the larger Sort, but is produc'd from the Hollows between the Protuberances of the Plant, and is preceded by a white cottony Subſtance, which ſurrounds the Flowers. Theſe Fruit are nearly as large, and of the ſame Shape and Colour with thoſe of the large Sort, and are as full of Seeds.

Theſe Seeds muſt be ſown in the ſame manner as the former, and the Plants preſerv'd both *Winter* and *Summer* in the ſame Situation, and ſhould have but little Moiſture in very hot Weather; in *Winter* they muſt have Water given them very ſparingly; for at that Seaſon they are very apt to rot, if they receive much Moiſture.

Theſe Plants are preſerv'd with great Care by ſuch as are curious in Exoticks, they being of the moſt uncommon and wonderful Structure, greatly differing from any thing in the vegetable Kingdom, of *European* Growth, inſomuch that many Perſons, at the firſt Sight of theſe Plants, have ſuppos'd them not natural Productions, but rather ſome artful Contrivance to amuſe People, until they have more maturely conſider'd their Parts.

The Fruit of both Sorts are eaten in the *Weſt-Indies:* They have a very grateful Acidity in their Taſte, which is extremely agreeable to the Inhabitants of thoſe warm Countries: But I don't know any farther Uſe of the Plants.

MELOCARDUUS; *vide* Melocactus.

MELON; *vide* Melo.

MELONGENA; Mad-Apple.

The *Characters* are;

The Flower conſiſts of one Leaf, ſhap'd like a Wheel, and cut into many Segments: From the Flower-Cup ariſes the Ovary, which becomes a fleſhy Fruit, full of Kidney-ſhap'd Seeds.

The *Species* are;

1. Melongena; *fructu oblongo, violaceo. Tourn.* Mad-Apple, with an oblong Violet-colour'd Fruit.

2. Melongena; *fructu oblongo, albo. Tourn.* Mad-Apple, with an oblong white Fruit.

3. Melongena; *ſpinoſa fructu rotundo, croceo. Tourn.* Prickly Mad-Apple, with a round Saffron-colour'd Fruit.

4. Melongena; *fructu rotundo, cum ſpinis violaceis. Tourn.* Mad-Apple, with a round Fruit and Violet-colour'd Prickles.

There are ſeveral other Varieties of this Plant, which differ in the Size, Form or Colour of the Fruit, or in the Shape of their Leaves; but thoſe here mention'd, are all that I have obſerv'd in the *Engliſh* Gardens.

Theſe Plants are greatly cultivated in the Gardens of *Italy, Spain* and *Barbary,* in which Places the Inhabitants eat the Fruit of them boil'd with fat Fleſh, putting thereto ſome ſcrap'd Cheeſe, which they preſerve in Vinegar, Honey or Salt-Pickle all Winter, to provoke a Venereal Appetite: But in Summer, when the Fruit is juſt ripe, they uſually gather them, and make them up into Puddings with ſeveral Sorts of Spices, and other Ingredients: Which Diſh the *Italians* are very fond of.

They are propagated by Seeds, which muſt be ſown upon a moderate Hot-bed in *March*; and when the Plants come up, they muſt be tranſplanted into another Hot-bed about four Inches aſunder, obſerving to water and ſhade them until they have taken Root: after which you muſt give them a great Share of Air when the Weather is warm, otherwiſe they will draw up very weak: They muſt alſo be frequently water'd, without which they will make but a very indifferent Progreſs: But when they are grown ſo ſtrong as to fill the Frame (which will be by the middle of *May*) you muſt tranſplant them out into a rich Spot of Ground at two Feet Diſtance, obſerving to preſerve as much Earth to the Roots as poſſible when you take them up, otherwiſe they are ſubject to miſcarry. You muſt obſerve to water them plentifully until they have taken Root, after which they will require but very little Care more than to keep them clear from Weeds, and in very dry Weather to give them ſome Water.

About the Middle of *June,* the Fruit will appear; at which time, if the Weather be very dry, you muſt often water them, which will cauſe the Fruit to grow very large, and increaſe their Number: Toward the latter End of *July* their Fruit will ripen, when you muſt preſerve the Seeds of each Kind ſeparate.

Theſe Plants are only preſerv'd as Curioſities in the *Engliſh* Gardens, the Fruit being never us'd in this Country, except by ſome *Italians* or *Spaniards*, who have been accuſtom'd to eat of them in their own Countries.

MELOPEPO; The Squaſh.

The *Characters* are;

It hath the whole Appearance of a Pumpkin *or* Gourd; *from which this differs in its Fruit, which is roundiſh, fleſhy, ſtreaked, angular, and for the moſt Part divided into five Partitions, incloſing flat Seeds adhering to a ſpungy Placenta.*

The *Species* are;

1. MELOPEPO; *compreſſus. C. B. P.* The common *or* flat Squaſh.
2. MELOPEPO; *fructu maximo, albo. Tourn.* The large white Squaſh, *commonly call'd* The white flat Pumpkin.
3. MELOPEPO; *fructu Citriformi. Tourn.* The Citron-ſhap'd Squaſh.
4. MELOPEPO; *verrucoſus. Tourn.* The warted Squaſh.
5. MELOPEPO; *verrucoſus, fructu & ſemine albis. Tourn.* Warted Squaſh, with white Fruit and Seed.
6. MELOPEPO; *flaveſcens, folio aſpero. Tourn.* Yellowiſh Squaſh, with a rough Leaf.

There are ſeveral other Varieties of this Plant in the *Weſt-Indies*, where they greatly abound, moſt of which are ſeminal Variations, and ſeldom continue long to produce the ſame Kinds from Seeds, at leaſt with us they never do continue three Years together the ſame, but do vary moſt extraordinarily; for the Seeds ſav'd from ſuch Plants which grew upright, and did not produce Runners (as the more ordinary Sorts) the ſucceeding Year, were as luxuriant as any of other Kinds, and the Fruit was of a different Shape from thoſe which the Seeds were taken from.

Theſe are all propagated by ſowing their Seeds in *March* upon a moderate Hot-bed; and when the Plants come up, they ſhould have a great Share of Air, otherwiſe they will draw up ſo weak, as to be good for little: You muſt alſo gently refreſh them with Water, as you ſhall find they require it. In *April* they muſt be tranſplanted out where they are deſigned to remain (which in *England* is moſt commonly upon old Dung-hills, over which the Vines will ſpread, and produce a great Quantity of Fruit:) If you plant them in an open Spot of Ground, you ſhould dig Holes at about fourteen Feet ſquare, into each of which you ſhould lay a Barrow full of hot Dung, making a Hollow in the Middle to receive the Plants, which muſt be fill'd with good rich Earth; then cover the Dung all over, Top and Sides, with the Earth that came out of the Hole, placing a Glaſs over the Middle; in which manner it ſhould remain until the Earth in the Holes begins to warm (which is commonly in twenty-four Hours after making) when you muſt take them up out of the Seed-bed, and plant two of 'em into each Hole, obſerving to water and ſhade them until they have taken Root: after which you muſt let them have much free Air; and when they begin to ſend forth their Shoots, you muſt take off the Glaſſes and permit them to run, obſerving only to clear them from Weeds, and in very dry

Weather to refreſh them now and then with a little Water.

In *July* theſe Plants will produce a great Quantity of Fruit, which ſome People are very fond of: Theſe they gather while young, and boil them with Meat inſtead of Turnips: But notwithſtanding what ſome Perſons have advanc'd concerning the Goodneſs of this Fruit, yet, from ſeveral Trials which I have made, I could not bring my Palate to reliſh them, for they have a very great Flatulency in their Taſte, which is agreeable to very few Perſons: But in the *Weſt-Indies*, where there is a Scarcity of Garden Roots and Plants, theſe and many other Sorts are eſteemed Delicacies.

MELONRY, or MELON-GROUND, is an Apartment in the Kitchen-Garden for the Propagation of *Melons*.

This Spot of Ground ſhould be open to the *South-Eaſt* Sun, but ſhelter'd from the *Weſt*, *North-Weſt* and *North-Eaſt* Winds, by Walls, Pales or Hedges; it ſhould alſo be upon a dry Soil, for nothing is more injurious to theſe Plants than much Wet: and as in the Spring it often proves very rainy Weather; if the Soil ſhould happen to be too moiſt, there will be no making the Ridges until it is very late. You ſhould alſo contrive to place it as near to the Dung as poſſible, which will ſave a great deal of Labour in wheeling the Dung; and, if poſſible, you ſhould contrive to have a Pond of Water near it, which in very dry Weather, will be very uſeful to water the *Melons*.

As to the Size of the Ground, that muſt be proportion'd to the Quantity of Ridges intended, which you may eaſily calculate by allowing eight Feet and a half for every Ridge, and the Holes plac'd at about three Feet aſunder; but it is the beſt Way to allow Room enough where you are not ſtraiten'd for it.

This Ground ſhould be inclos'd with a Reed-Fence, and kept conſtantly lock'd up during the Time that the *Melons* are growing, for if they are expos'd to every Perſon that walks in the Garden (moſt of whom have a Curioſity to handle the Vines, and look after the Fruit) it will be of ill Conſequence, nothing being more injurious to theſe Plants than frequent tumbling or diſturbing their Leaves.

The common Practice in moſt Gentlemens Gardens, is, to incloſe a Spot of Ground either with Walls or Pales, which they conſtantly appropriate to this Purpoſe: But this is by no means a good Method; for it rarely happens that theſe ſucceed well longer than two Years in the ſame Place, unleſs the Soil be removed, and freſh brought in, which is very expenſive; therefore the beſt Way is, to have a ſufficient Parcel of Reeds made into Pannels, which may be annually moved from Place to Place, ſo that you need not continue your Ridges longer than one Year in the ſame Place. And if you have a Piece of Ground which is large enough to divide into four ſuch Places, the Fence may be every Year remov'd forward, till the Whole has been occupy'd; after which you may return to the Spot where you began, which, by that Time, will be as good as freſh Earth: And hereby, without much Trouble, you may remove them every Year; for as one of the Sides will remain unremov'd every Time the Fence is carried forward, ſo the Labour will not be ſo great as if it were wholly remov'd to ſome Diſtance; and theſe Reed-Fences are much preferable to either Walls or Pales for this Purpoſe.

MENTHA; Mint.

The *Characters* are;

It is a verticillate Plant, with a labiated Flower conſiſting of one Leaf, whoſe Upper-lip is arched, and the Under-lip is divided into three Parts; but both of them are ſo cut, that the Flower ſeems to be divided into four Parts, the two Lips ſcarcely appearing; theſe Flowers are collected into thick Whorles in ſome Species, but in others they grow in a Spike; each Flower having four Seeds ſucceeding it, which are incloſ'd in the Flower-cup: To which may be added, It hath a creeping Root, and the whole Plant has a ſtrong aromatick or balſamick Scent.

The *Species* are;

1. MENTHA; *anguſtifolia, ſpicata. C. B. P.* Common *Spik'd-Mint, uſually call'd* Spear-Mint.
2. MENTHA; *ſpicis brevioribus & habitioribus, foliis Menthæ fuſcæ, ſapore fervido piperis. Raii. Syn.* Pepper-Mint.
3. MENTHA; *ſylveſtris, folio longiore. C. B. P.* Long-leav'd *Horſe-Mint*, or *Mentaſtrum*.
4. MENTHA; *arvenſis, verticillata, hirſuta. J. B. Water-Mint* with whorled Coronets, *commonly call'd* Water-Calamint.
5. MENTHA; *aquatica, ſeu Siſymbrium. J. B. Water-Mint.*
6. MENTHA; *Siſymbrium dicta hirſuta, glomerulis ac foliis minoribus ac rotundioribus. Raii. Syn.* Orange-Mint.
7. MENTHA; *ſpicata, folio variegato. C. B. P. Spear-Mint*, with a variegated Leaf.
8. MENTHA; *rotundifolia, paluſtris ſeu aquatica major, folio variegato. Tourn.* The Great Round-leaf'd *Water-Mint*, with a variegated Leaf.
9. MENTHA; *anguſtifolia, ſpicata, glabra, folio rugoſiore, odore graviore. Raii. Syn.* Spear-Mint, with a rugged Leaf, and ſtrong Scent.
10. MENTHA; *Chalepenſe, anguſtifolium, rarò florens. Boerh. Ind.* Narrow-leav'd Aleppo *Mint*, which rarely flowers.

There are ſeveral other Sorts of *Mint*, which are preſerv'd in ſome curious Botanick Gardens, many of which are Natives of *England*; but as they are not cultivated for Uſe, ſo I ſhall omit them in this Place, thoſe above-mention'd being the Sorts which are commonly propagated for Kitchen or Medicinal Uſes.

The firſt Sort is the moſt commonly cultivated in the *Engliſh* Gardens, both for the Uſe of the Kitchen and Medicine; but the ſecond Sort is by ſome greatly eſteem'd for its Heat, to make a ſimple Water: This, at preſent, is not very common in the Gardens, but has been found growing wild in ſeveral Parts of *England*. The third Sort is alſo us'd in Medicine, but is rarely cultivated in Gardens, being found in great Plenty in ſeveral Places near *London*. The fourth and fifth Sorts are very common by the Sides of Ponds, and on moiſt Soils, in divers Parts of *England*, and are rarely cultivated in Gardens: Theſe are both us'd in Medicine, but the Markets are ſupply'd with them from the Fields. The ſeventh and eighth Sorts are preſerv'd in Gardens, for the Beauty of their variegated Leaves: As are the ninth and tenth

Sorts, for their Oddneſs; the one having curl'd Leaves, and the other being very white, but ſeldom produces Flowers in *England*.

All the Sorts of *Mint* are eaſily propagated by parting the Roots in the Spring, or by planting Cuttings during any of the Summer Months; but ſhould have a moiſt Soil: And after planting, if the Seaſon ſhould prove dry, they muſt be often water'd, until they have taken Root; after which, they will require no farther Care but only to keep them clear from Weeds: They ſhould be planted in Beds about four Feet wide, allowing a Path two Feet wide, to go between the Beds to water, weed, and cut the Plants. The Diſtance they ſhould be ſet is about four or five Inches, or more, becauſe they ſpread very much at their Roots; for which Reaſon the Beds ſhould not ſtand longer than three Years before you plant freſh; for by that Time the Roots will be matted ſo cloſely, as to rot and decay each other, if permitted to ſtand longer. There are ſome People who are very fond of *Mint-Sallet* in Winter and Spring; in order to obtain which, they take up the Roots before *Chriſtmas*, and plant them upon a moderate Hot-bed pretty cloſe, covering them with fine Earth about an Inch thick, and cover the Bed either with Mats, or Frames of Glaſs; in theſe Beds the *Mint* will come up in a Month's Time, and be ſoon fit to cut for that Purpoſe.

When the Herb is cut for Medicinal Uſe, it ſhould be done in a very dry Seaſon, juſt when it is in Flower; for if it ſtand longer, it will not be near ſo handſome, nor ſo well-taſted; and if it be cut when it is wet, it will change black, and be little worth: This ſhould be hung up to dry in a ſhady Place, where it may remain until it be uſed.

If the Soil be good in which theſe Plants are to be ſet, they will afford three Crops every Spring: But after *July* they ſeldom prove good; therefore what Shoots are produc'd after that Time, ſhould be permitted to remain till *Michaelmas*, when you muſt cut them down cloſe; and after having clear'd the Beds from Weeds, you ſhould ſpread a little fine rich Earth all over them, which will greatly encourage the Roots againſt the ſucceeding Spring.

MENTHA CATARIA; *vide* Cataria.

MENYANTHES, *is* Trifolium Paluſtre, *or* Bog-bean.

This Plant is common upon boggy Places in divers Parts of *England*; but is never cultivated in Gardens, for which Reaſon I ſhall not trouble the Reader with any farther Account of it.

MERCURIALIS. Mercury.

The *Characters* are;

The Leaves are crenated, and grow by Pairs oppoſite: The Cup of the Flower conſiſts of one Leaf, which expands, and is cut into three Segments; theſe are Male and Female in different Plants: The Flowers of the Male grow in long Spikes, and conſiſt of many Stamina *and* Apices, *which are loaded with* Farina: *The Ovary of the Female Plant becomes a teſticulated Fruit, having a ſingle round Seed in each Cell.*

The *Species* are;

1. Mercurialis; *teſticulata, ſive mas Dioſcoridis & Plinii.* C. B. P. The Teſticulated *Mercury, vulgarly call'd,* The Male French *Mercury*.

2. Mercurialis; *ſpicata, ſive fœmina Dioſcoridis & Plinii.* C. B. P. The Spiked French *Mercury*.

3. **Mercurialis**; *montana, teſticulata. C. B. P.* Teſticulated Mountain *Mercury, commonly call'd,* Dogs *Mercury.*

4. **Mercurialis**; *montana, ſpicata. C. B. P.* Spiked Mountain, *or* Dogs *Mercury.*

5. **Mercurialis**; *fruticoſa, incana, mas. Boerh. Ind.* Hoary Shrubby Male *Mercury.*

6. **Mercurialis**; *fruticoſa, incana, teſticulata. Tourn.* Shrubby Hoary Teſticulated *Mercury.*

The two firſt Sorts are annual Plants, which grow wild in divers Parts of *England,* and are rarely propagated in Gardens: The Seeds thereof being ſown, produce the two Sorts promiſcuouſly, and are both gather'd indifferently for Medicinal Uſe. Theſe Seeds ſhould be ſown as ſoon as they are ripe by thoſe who would cultivate it: They will grow upon any Soil or Situation.

The third and fourth Sorts grow wild in ſhady Lanes in divers Parts of *England,* where they ſpread greatly at the Roots: Theſe are never us'd in Medicine.

The fifth and ſixth Sorts are not Natives of this Country, but are preſerv'd in curious Botanick Gardens for Variety: Theſe may be propagated by ſowing the Seeds ſoon after they are ripe, in a Bed of freſh Earth, where, if the Seeds are good, the Plants will come up the ſucceeding Spring, and endure the Cold of our ordinary Winters very well: But if the Plants from which the Seeds are taken, have not had ſome of the Male Plants growing amongſt them, the Seeds will not grow, as I have ſeveral Times experienc'd.

MESPILUS. The Medlar.

The *Characters* are;

The Leaves are either whole, and ſhap'd like thoſe of the Laurel, *as in the manur'd Sorts, or laciniated, as in the wild Sorts: The Flower conſiſts of five Leaves, which expand in Form of a* Roſe: *The Fruit is umbilicated, and are not eatable till they decay, and have, for the moſt part, five hard Seeds in each.*

The *Species* are;

1. **Mespilus**; *Germanica, folio laurino, non ſerrato, ſive Meſpilus Sylveſtris.* C. B. P. The common *Medlar, commonly call'd,* The Nottingham *Medlar.*

2. **Mespilus**; *folio laurino, major. C. B. P.* The Large Dutch *Medlar.*

3. **Mespilus**; *Apii folio, ſylveſtris, ſpinoſa, ſive* Oxy*acantha. C. B. P.* The common Hawthorn.

4. **Mespilus**; *ſpinoſa, ſive* Oxy*acantha, flore pleno. Tourn.* The Double-flowering Hawthorn.

5. **Mespilus**; *Apii folio laciniato. C. B. P.* The Azarola, *or* Neapolitan Medlar.

6. **Mespilus**; *ſpinoſa, Pyri folio. H. L.* The Pyracantha *or* Ever-green Thorn.

7. **Mespilus**; *ſeu ſpina acuta, biflora, Britannica. Park. Theat.* The Glaſtenbury Thorn.

8. **Mespilus**; *ſpinoſa, ſive* Oxy*acantha, Virginiana. H. L.* The Cockſpur, *or* Virginian Hawthorn.

9. **Mespilus**; *aculeata, pyrifolia, denticulata ſplendens, fructu inſigni rutilo, Virginienſis. Pluk. Phyt.* The Virginian Medlar, with ſhinning Leaves, and very red Fruit, *commonly call'd,* The Virginian Azarol with red Fruit.

10. **Mespilus**; *Virginiana, Apii folio, vulgari ſimilis major, grandioribus ſpinis. Pluk. Phyt.* Virginian Hawthorn with long ſtrong Thorns.

11. **Mespilus**; *Prunifolia, Virginiana, non ſpinoſa, fructu nigri-*

cante. Pluk. Phyt. Virginian Hawthorn, with a Plumb-leaf and black Fruit.

12. Mespilus; *folio ſubrotundo, fructu rubro. Tourn.* The Dwarf Medlar with red Fruit.

13. Mespilus; *folio rotundiore, fructu nigro, ſubdulci. Tourn.* Dwarf Medlar with black Fruit.

14. Mespilus; *Apii folio, ſylveſtris, ſpinoſa, ſive Oxyacantha, fructu albo. Cat. Plant. Hort.* The common Hawthorn, with white Fruit.

15. Mespilus; *Americana, non ſpinoſa, fructu luteo.* The American Haw, with yellow Fruit.

The firſt of theſe *Medlars* was formerly more common in the Gardens and Nurſeries than at preſent, for ſince the *Dutch Medlar* has been introduc'd, it hath obtain'd the Preference, the Fruit of this being much larger and better flavour'd than the old one, which hath occaſion'd their being cultivated in greater Plenty.

Both theſe Sorts may be propagated by budding or grafting 'em upon the *Hawthorn*, or the *Pear-ſtock*, upon either of which they will take very well; and may be afterwards tranſplanted into the Fruit-Garden, either in Standards or train'd againſt an Eſpalier, in both which Methods they will ſucceed very well; but if the larger Sort be train'd on an Eſpalier, the Fruit will be much larger: But you muſt be careful in pruning, not to ſhorten their bearing Branches, for the Fruit being, for the moſt part, produc'd at the Extremity thereof; if they are ſhorten'd, it will be cut away.

Theſe Plants will grow upon almoſt any Soil, but the Fruit will be much larger upon a ſtrong Soil, rather moiſt than dry; though upon a middling Soil they are generally beſt flavour'd.

Theſe Fruits are permitted to remain upon the Trees until *October*, when they will begin to fall; at which Time they muſt be gather'd, when dry, and laid by in a dry Place, until they become ſoft, and begin to decay, which is commonly about a Month after they are gather'd, when they will be fit to be eaten; before which they are ſo very harſh, that it is almoſt impoſſible to eat them.

The third Sort is ſo very common in *England*, that it would be to little Purpoſe to ſpend much Time in treating of it, ſince the great Uſe to which it is apply'd in *England*, is to make Fences, the manner of doing which is already deſcribed under the Article of *Fences* and *Hedges*; but I would only mention in this Place, that there are two or three Varieties of this Plant, commonly obſerved in the Hedges near *London*, which differ in the Size of their Leaves and Fruit; but that Sort which produces the ſmalleſt Leaves is the beſt worth cultivating for Hedges, becauſe their Branches always grow cloſe together, ſo that the Hedge will clip much cloſer, and appear more beautiful: for it is a common Obſervation, that the Branches of all Sorts of Trees grow in a proportionable Diſtance to the Size of their Leaves.

The fourth Sort is a Variety of the third, from which it differs in having fair double Flowers. This is propagated by being budded or grafted upon the common Sort, and may be train'd up with regular Stems to the Height of twelve or fourteen Feet, and when planted in Wilderneſſes or other Plantations of

Trees, being intermix'd with other flowering Trees of the ſame Growth, makes a very fine Appearance, during the Seaſon of its Flowering, which is commonly moſt part of *May*; the Flowers being produced in large Cluſters, as in the common Sort, but are very double: This Tree is pretty common in the Nurſeries near *London*.

The *Azarola* or *Neapolitan Medlar*, has been introduc'd from *Italy*, where the Fruit is greatly eſteem'd. This is alſo propagated by budding or grafting it upon Stocks of the common *Hawthorn*, and ſhould be tranſplanted into a moiſt Soil and a warm Situation, where it will produce great Quantities of Fruit annually in *England*, which are ſhap'd like thoſe of the common *Hawthorn*, but much larger, and muſt be preſerv'd till they begin to decay before they are eaten, as the common *Medlar*.

I have obſerv'd theſe Trees in many Places planted againſt warm Walls, as ſuppoſing them too tender to produce Fruit in this Climate, without ſuch Aſſiſtance; which is a very great Miſtake, for I have ſeen much more Fruit upon Standard Trees than were upon thoſe againſt Walls, and they ripen'd well and were better taſted.

The *Pyracantha* or *Ever-green Thorn*, was formerly in greater Eſteem than at preſent; it is commonly planted againſt Walls or Buildings, where it affords an agreeable Proſpect in Winter, (eſpecially if it has Plenty of Fruit) the Fruit being at that Seaſon of a beautiful red Colour, and are commonly produced in very large Cluſters, which together with its ever-green Leaves, renders it worthy of a Place in every good Garden. But in order to have Fruit upon every Part of the Tree, in which its greateſt Beauty conſiſts, there ſhould always be a Succeſſion of young Branches train'd in, for the Fruit is always produc'd upon the ſecond and third Years Wood; and all thoſe Branches which are older never produce any; for want of rightly obſerving this Method, moſt of the Trees of this Kind ſeldom have any Fruit but toward their extreme Parts, which is one Reaſon theſe Trees have been ſo much neglected of late Years.

The Branches of this Tree are very flexible, ſo that it cannot be train'd up to a Standard, but muſt always have the Aſſiſtance of a Wall, or ſome other Building to ſupport it. It is very hardy, and will grow in almoſt any Soil or Situation, but it agrees beſt with a dry Soil, in which it will always produce a greater Number of Fruit.

This may be propagated by laying down the tender Shoots, which are commonly two Years before they will be rooted enough to tranſplant; (but notwithſtanding this, it is a more expeditious Method than to raiſe them from Seeds, which rarely come up until the ſecond Year, and are but of ſlow Growth the two ſucceeding Years) then they may be either planted where they are to remain, or into a Nurſery for two or three Years, where you may train them according to the Places where they are deſign'd to be planted. It is commonly three Years after they are planted out before they begin to produce Fruit.

The *Glaſtenbury Thorn* is preſerv'd in many Gardens as a Curioſity; this often produces ſome Bunches of Flowers in Winter, and afterwards flowers again at the Seaſon with the common Sort, but doth in no other reſpect differ from the common *Hawthorn*; the fabulous Story of its budding on *Chriſtmas-day* in the Morning, flowering at Noon, and decaying at Night, is now with good Reaſon disbeliev'd; for although it may ſometimes happen that there may be ſome Bunches of Flowers open on that Day, yet, for the moſt part, it is later in the Year before they appear; but this in a great meaſure depends on the Mildneſs of the Seaſon. This Sort may be propagated by budding or grafting it upon the common *Hawthorn*, and ſhould be planted in a warm Situation, which will greatly promote the Flowering in the Winter; for if they are too much expos'd to cold Winds, the Flower-buds will decay without opening, tho' in other reſpects the Plant is equally as hardy as the common Sort, and may be treated in the ſame manner.

The *Cockſpur Hawthorn* is of larger Growth than any of the former, and is very hardy: This may be propagated by ſowing the Seeds in the ſame manner as the common *Hawthorn*, and they commonly abide in the Ground till the ſecond Year, as they do; therefore the moſt expeditious Way to increaſe this Plant is to bud or graft it upon the common *Hawthorn*, tho' I muſt confeſs, that the Trees thus propagated will not arrive to the Magnitude as thoſe generally do which are propagated from Seeds, but will produce Fruit much ſooner; but where a Perſon intends to have them in Perfection, they ſhould always be propagated from Seeds. This Sort will grow to the Height of eighteen or twenty Feet, and may be train'd up with regular Stems and Heads, and when planted amongſt other Trees of the ſame Growth, they make an agreeable Variety; for in the Spring, when they are in Bloſſom, they are very pleaſing, the Flowers being very large, and are produc'd in great Bunches at the Extremity of their Branches; and in Autumn, when the Fruit is ripe, which is very large, and grows in great Cluſters, they have a beautiful Appearance, and are eſteem'd very good Feed for Deer.

The ninth, tenth, and eleventh Sorts were brought from *Virginia* ſeveral Years ſince, and are preſerved as Curioſities by ſuch Perſons as are Lovers of Trees. Theſe may be propagated from Seeds, as the other Sorts, or by budding or grafting 'em upon the common *Hawthorn*; and may afterwards be tranſplanted into Wilderneſs Quarters amongſt other Trees of the ſame Growth, where they will afford an agreeable Variety.

The ninth Sorth will grow larger than the other two, and if rais'd from Seeds, will equal the *Cockſpur Hawthorn*; and the Flowers and Fruit are full as large as thoſe, ſo that it is very proper to be intermix'd therewith.

The tenth and eleventh Sorts commonly grow to the Size of our common *Hawthorn*, with which they may be intermix'd, for Variety, in Wilderneſs Plantations. The Fruit of theſe two kinds are hardly ſo large as thoſe of the common *Hawthorn*, but whether any of theſe Fruits are eatable, I don't at preſent know, tho' I believe they are much the ſame as the common Sort.

The fourteenth Sort is a Variety of the common *Hawthorn*, which was obſerv'd ſome Years ſince in *Hertfordſhire*: but whether the Seeds of this Kind will produce the ſame again, is what I can't at preſent determine; however it may be propagated by budding or grafting it upon the common *Hawthorn*, which is the only ſure Method to preſerve the Variety; tho' there is nothing more in it, than that it is uncommon.

The fifteenth Sort has been lately introduced among us from *America*: This is different from the other Sorts in the Shape of the Leaves, and hath no Thorns upon the Branches: but whether the Fruit will continue of the ſame Colour as the Original, can't as yet be determin'd; ſince there are no Plants in *England* large enough to produce Fruit, that I know of. This may be propagated by budding or grafting it upon the common *Hawthorn*, and is worthy of a Place in all curious Collections of Trees.

The twelfth and thirteenth Sorts are of humbler Growth, ſeldom riſing above five or ſix Feet high, and are proper to intermix with Shrubs of the ſame Growth, where, by the Variety of their woolly Leaves, together with their Flowers and Fruit, in their Seaſons, they add greatly to the Variety of ſuch Plantations: They may be eaſily propagated by laying down their tender Branches, which, in one Year, will be rooted ſufficiently to tranſplant, when they may be plac'd where they are to remain, or planted into a Nurſery, and train'd up to regular Heads; by which Method they will be leſs liable to miſcarry, than if they were plac'd to remain in the Wilderneſs immediately.

The twelfth Sort produces great Quantities of Suckers from the Roots, which may be taken off in the Spring, and tranſplanted into a Nurſery two or three Years, until they have acquired Strength enough to tranſplant for good where they are to remain; by which Method they may be greatly increas'd: but the Plants thus rais'd will be more ſubject to produce a great Number of Suckers from their Roots, which, if not yearly taken off, will grow up into a Confuſion, and ſtarve the old ones.

They produce their Flowers in *April* and *May*, and their Fruits are commonly ripe in *Auguſt*: but theſe are of no Uſe, except to propagate the Plants; which being a tedious Method, and the Layers taking Root ſo freely, renders it not worth practiſing; tho' it may happen that ſome Varieties may be obtain'd this Way, as is often found in many other Trees and Shrubs.

METHONICA: The Superb Lily; *vulgo*.

The *Characters* are;

It hath a fleſhy Root in Form of a ſtrait Ruler, which is venomous: The Stalk is climbing: The Leaves grow alternately, and ſhap'd like thoſe of the Lily, *but have a Claſper at the End: The Flower is naked, conſiſting of ſix Leaves, which are elegantly ſinuated, feather'd, and reflex'd back, with ſix* Stamina *(or Threads); in the Centre of which is the Ovary, which becomes an oval Fruit, divided into three Cells, containing ſeveral round Seeds.*

There is but one *Species* of this Plant at preſent known, which is,

METHONICA; *Malabarorum. H. L.* Malabar *Methonica*, or The Superb Lily of Ceylon.

This beautiful Plant is propagated by parting the Roots in *Auguſt* (when the green Leaves are decay'd); which ſhould be planted into Pots fill'd with light ſandy Earth, and may be expos'd to the open Air for about a Fortnight or three Weeks after, placing the Pots where they may have the Morning Sun till eleven a Clock; and if the Seaſon ſhould prove very dry, you muſt now and then gently refreſh them with Water; but you muſt avoid giving them too much (eſpecially while the Roots are unactive) which will rot them in a ſhort Time.

Toward the End of *Auguſt* or the Beginning of *September*, you muſt remove the Pots into the Stove, placing them where they may have free Air, but ſo as to have a warm Situation, obſerving, as was before directed, to refreſh them gently with Water, but not to give them much until they appear above-ground, which is commonly in *November*, provided they have Warmth enough, otherwiſe they will not come up till after *Chriſtmas*: When the Leaves begin to appear above-ground, you muſt increaſe the Quantity of Water before given them, and place a Stick down by the Root, to which the Stem ſhould be faſten'd to ſupport it, otherwiſe it will trail upon the Ground: You ſhould alſo obſerve to place the Pots ſo that they may not ſtand too near any large growing Plants which may hang over them, whereby theſe Plants will be drawn up, which will prevent their Flowering; but they muſt, at this Seaſon, be kept pretty warm, in order to encourage them to flower. The Heat with which they thrive beſt is about ten Degrees above temperate, (as mark'd on Mr. *Fowler's Botanical Thermometers*) but you muſt never let them have a leſs than temperate Heat, leſt the Roots ſhould periſh.

The Off-ſets taken from the old Roots are commonly two or three Years before they flower; during which time they ſhould not be tranſplanted: but the Earth in the upper Part of the Pots ſhould be taken out, and freſh put in every Year to encourage the Roots, being very careful in doing this not to injure or diſturb the ſame. In *July* and *Auguſt* the Pots may be expos'd to the open Air, if the Seaſon be warm, but all the other Part of the Year they muſt be continu'd in the Stove.

MEUM. Spignel.

The *Characters* are;

It is an umbeliferous Plant, with very narrow Leaves: The Seeds are large, oblong and ſtriated: To which may be added, it hath a perennial Root.

This Plant is propagated in the *Phyſick-Gardens*, for Medicinal Uſe; but is very ſeldom found in other Gardens. It may be propagated by Seeds, which ſhould be ſown in Autumn ſoon after they are ripe; and in the Spring the Plants will appear, when they ſhould be carefully clear'd from Weeds, and in very dry Weather muſt be refreſh'd with Water. In this Place the Plants may remain until the Autumn following, when they may be tranſplanted into a ſhady Border about a Foot aſunder, where they may remain for Uſe. They may alſo be propagated by parting their Roots in Autumn, which is the moſt expeditious Method.

MEZEREON; *vide* Thymelea.

MILDEW is a Diſeaſe that happens to Plants, and is caus'd by a dewy Moiſture which falls on them, and continuing for want of the Sun's Heat to draw it up, by its Acrimony corrodes, gnaws and ſpoils the inmoſt Subſtance of the Plant, and hinders the Circulation of the nutritive Sap, upon which the Leaves begin to fade, and the Bloſſoms and Fruit are much prejudic'd. Or, *Mildew* is rather a concrete Subſtance, which exſudes thro' the Pores of the Leaves.

What the Gardeners commonly call *Mildew*, is an Inſect which is frequently found in great Plenty preying upon this Exſudation.

Others ſay, That *Mildew* is a thick clammy Vapour exhal'd in the Spring and Summer from Plants, Bloſſoms, and even the Earth itſelf, in cloſe ſtill Weather, where there is neither Sun enough to draw it upwards to any conſiderable Height, nor Wind of Force ſtrong enough to diſperſe it, and that it hanging in the lower Regions, when the Cold of the Evening comes on, condenſes and falls on Plants, and with its thick clammy Subſtance ſtops the Pores, and by that means prevents Perſpiration, and hinders the Sap from aſcending to nouriſh their Flowers, Shoots, *&c.*

Others ſay, That *Mildew* is a corroſive or nipping *Dew*, proceeding from the Vapours that are exhal'd by the Earth, which being drawn up, and falling down again on the tender opening Buds, infects them by its Acrimony, and hinders the Circulation of the nutritious Sap in the proper Veſſels; upon which the Leaves begin to fade, and the Bloſſoms and Fruit receive a very great Prejudice.

Some make this Obſervation, That the Places moſt liable to *Mildew*, are incloſ'd Grounds and Valleys, and thoſe that lie tending to the Eaſt; and the Reaſons that they give why thoſe Grounds which lie from the Horizon to the Eaſt are moſt ſubject to *Mildew* and *Blaſtings*, may be by the Sun's attracting thoſe Vapours towards it after the manner that a great Fire in a Room draws the Air to it: So the Sun having ſet theſe in Motion, and not having Strength enough to draw them into the middle Region, to form them into a Cloud, he does yet draw them till he is below our Horizon, and then theſe *Dews* tend to the Earth from whence they were exhal'd, and in Motion to the Weſt, do, as it were, fall upon that Ground which lies Eaſtward at right Angles, and therefore is moſt offenſive to them.

But I take the true Cauſe of the *Mildew* appearing moſt upon Plants which are expos'd to the Eaſt, to proceed from a dry Temperature in the Air when the Wind blows from that Point, which ſtops the Pores of Plants and prevents their Perſpiration, whereby the Juices of the Plants are concreted upon the Surface of their Leaves, which being of a ſweetiſh Nature, Inſects are inticed thereto, where finding proper Nutriment, they depoſite their Eggs, and multiply ſo faſt as to cover the whole Surfaces of Plants, and by their corroding the Veſſels, prevent the Motions of their Sap; and it is very probable that the Excrements of theſe Inſects may enter the Veſſels of Plants, and by mixing with their Juices may ſpread the Infection all over them: For it is obſervable, that whenever a Tree has been greatly affected by this *Mildew*, it ſeldom recovers it in two or three Years, and many times never is intirely clear from it after.

MILIUM; Millet.

The *Characters* are;

It hath a looſe divided Pannicle; and each ſingle Flower hath a Calyx conſiſting of two Leaves, which are inſtead of Petals, to protect the Stamina and Piſtillum of the Flower, which afterwards becomes an oval ſhining Seed.

The *Species* are;

1. MILIUM; *ſemine luteo. C. B. P.* Yellow *or* Common *Millet.*

2. MILIUM; *ſemine albo. C. B. P. Millet,* with a white Seed.

3. MILIUM; *ſemine nigro. C. B. P. Millet,* with a black Seed.

4. MILIUM; *Arundinaceum, ſubrotundo ſemine, Sorgo nominatum. C. B. P.* Reed-like *Millet,* with roundiſh Seeds, *commonly call'd* Sorgo *or* Guiney Corn.

There are ſome other Varieties of theſe Plants which chiefly differ in the Colour of their Seeds, which will be to little Purpoſe to enumerate in this Place, thoſe here mention'd being the principal Sorts which I have obſerv'd growing in *England.*

The three firſt Sorts are Varieties of each other, and only differ in the Colour of their Seeds, which Difference will ariſe from the ſame Seeds very often; but the Yellow is always preferr'd, though the White is no way inferior to it, but the Black Sort is eſteem'd little worth.

Theſe Plants were originally brought from the *Eaſtern* Countries, where they are ſtill greatly cultivated, from whence we are furniſhed annually with this Grain, which is by many Perſons greatly eſteem'd for Puddings, *&c.* Theſe are never cultivated in *England,* but by way of Curioſity in ſmall Gardens, where the Seeds do generally ripen very well.

They muſt be ſown the Beginning of *April* upon a warm dry Soil, but not too thick, becauſe theſe Plants divide into ſeveral Branches, and ſhould have much Room; and when they come up, they ſhould be clear'd from Weeds, after which they will, in a ſhort time, get the better of them, and prevent their future Growth. In *Auguſt* theſe Seeds will ripen, when it muſt be cut down and beaten out, as is practis'd for other Grain.

The *Guiney Corn* ariſes commonly to be ten or twelve Feet high, and has jointed Stalks like the Reed; upon the Tops of which the Panicles are produc'd, which are very large, as are alſo the Grains. This Sort will come up very well, if ſown as the former, but ſeldom perfects its Seeds with us, except the Seaſon be very warm.

MILLEFOLIUM; Yarrow, Milfoil, *or* Noſe-bleed.

There are ſeveral Sorts of this Plant, which are cultivated in Botanick Gardens for Variety; but as they are rarely propagated for Uſe, I ſhall paſs them over without naming them, and only obſerve, that the common Sort, which grows in great Plenty upon dry Banks in moſt Parts of *England,* is that which is order'd for Medicinal Uſe.

MIMOSA: The Senſitive Plant.

The *Characters* are;

The Flower conſiſts of one Leaf, which is ſhap'd like a Funnel, having many Stamina *in the Center: Theſe Flowers are collected into a round Head: From the Bottom of the Flower riſes the* Piſtillum, *which afterwards becomes an oblong, flat, jointed Pod, which opens both ways, and contains in each Partition one roundiſh Seed.*

The *Species* are;

1. MIMOSA; *ſeu frutex ſenſibilis. Tourn.* The common Senſitive Plant.

2. MIMOSA; *humilis, fruteſcens, & ſpinoſa, ſiliquis conglobatis. Plum.* Dwarf Shrubby Humble Plant, having Thorns, and the Pods growing together in Bunches.

3. Mimosa; *ſpinis horridiuſcula, & ſenſitiva magis. H. R. Par.* Greater Senſitive (*or* Humble Plant) with very ſharp Thorns.

4. Mimosa; *latifolia, Siculis in orbem glomeratis. Tourn.* Broad-leav'd *or* Common Humble Plant.

5. Mimosa; *ſpuria de Pernambucq, dicta Mimoſa Italica. Zan.* The Slothful Senſitive Plant; *vulgô.*

6. Mimosa; *fruteſcens & ſpinoſa, tenui Acaciæ folio, ſiliculis plurimis villoſis, in capitulum congeſtis. Houſt.* Prickly Shrubby Senſitive Plant, with narrow Acacia Leaves, having many hairy Pods, collected into a Head.

7. Mimosa; *herbacea procumbens & ſpinoſa, caule anguloſo, ſiliquis quadrivalvibus. Houſt.* Trailing Prickly Senſitive Plant, with angular Stalks and Pods, opening in four Cells.

8. Mimosa; *aquatica herbacea procumbens, non ſpinoſa, flore luteo pleno. Houſt.* Water Trailing Senſitive Plant, without Spines, having a full yellow Flower.

There are ſome other *Species* of this Plant which grow in the warm Parts of *America*, but thoſe here mention'd, are what I have obſerv'd in the *Engliſh* Gardens.

The firſt Sort is commonly known by the Name of *Senſitive Plant*, to diſtinguiſh it from the others, which are generally call'd *Humble Plants*, becauſe upon being touch'd, the Pedicle of their Leaves falls downward, whereas the Leaves of the other Sort are only contracted upon the Touch.

Theſe Plants are all propagated from Seeds, which muſt be ſown upon a Hot-bed early in the *Spring*; and when the Plants come up, they muſt be tranſplanted into ſmall Pots fill'd with light rich Earth, and plung'd into a freſh Hot-bed, obſerving to water and ſhade them until they have taken Root: After which you muſt often refreſh 'em with Water, and let 'em have Air in Proportion to the Warmth of the Seaſon, always obſerving to keep the Bed in a good Temper for Heat, as alſo to cover the Glaſſes every Night with Mats, which will greatly facilitate their Growth.

With this Management, in about a Month's time, the Plants will have greatly advanc'd, and their Roots will fil the Pots; therefore you muſt remove them into larger Pots, by ſhaking them out of thoſe they are in, together with the Earth, which ſhould be preſerv'd to their Roots; and (after having pared off the Roots which were matted round the Outſide of the Ball of Earth) you muſt place the Plants into the larger Pots, filling them up with the like rich Earth; then plunge them into the Hot-bed, obſerving to water them well until they have taken Root; and if you ſee the Plants inclinable to droop, when the Sun ſhines warm upon the Glaſſes, you muſt ſhade them until they have recover'd and are able to endure the Heat.

You muſt alſo obſerve to give them a greater Share of Air, as the Seaſon advances in Warmth, but you muſt never expoſe them to the open Air, which will not only retard their Growth, but alſo deſtroy the ſenſitive Quality; ſo that I have ſeen ſome Plants of theſe Kinds, which after having been expos'd to the open Air a few Days, have intirely loſt their Motion.

The firſt of theſe Sorts, if duly water'd and preſerv'd in a kindly Warmth, will grow, in the Compaſs of one Seaſon, to the Height of eight or nine Feet, and produce great Quantities of Flowers, but unleſs the *Autumn* proves very favourable, the Seeds do ſeldom ripen, and the Plant being much tenderer than the other Sorts, is rarely preſerv'd through the *Winter*, tho' plac'd in the warmeſt Stoves, ſo that we are oblig'd to procure the Seeds from Abroad.

The ſecond Sort is of much humbler Growth, ſeldom riſing above two Feet high, but branches out very much, and is beſet with Thorns: This will abide two or three Years, if preſerv'd in a good Stove, and generally produces Seeds every Year, ſo that it is now become very common in the *Engliſh* Gardens, being the eaſieſt to preſerve, and the moſt plentiful in ſeeding of all the Sorts.

The third Sort hath very broad Leaves, and is greatly beſet with ſharp Thorns: This will riſe to the Height of five or ſix Feet, but has generally very ſlender Branches, and is tenderer than the laſt-mention'd: It rarely produces Seeds in this Country, but may be preſerv'd through the Winter in a very good Stove.

The fourth Sort has the quickeſt Motion of all the Kinds at preſent in *England:* This is ſomewhat like the third in Appearance, but grows more erect, and hath fewer Spines, and the Flowers are of a different Colour. The Seeds of this kind are frequently brought over from *Barbados*, where, by the Plenty of Seeds brought over, it ſeems to be the moſt common in that Country.

The fifth Sort is preſerv'd in Botanick Gardens for Variety, but is a Plant of no great Curioſity: It hath ſomewhat the Appearance of the firſt Sort, and will grow erect to the Height of five or ſix Feet, and produce great Quantities of Seeds; but it having no Motion upon being touch'd, renders it leſs valuable than the others.

Theſe Plants were moſt of them thought to be Annuals formerly, becauſe upon the firſt Approach of cold Weather they were deſtroy'd; but ſince the modern Invention of Bark-ſtoves, moſt of theſe Sorts have been preſerv'd two or three Years, and do produce Seeds very well.

The Stove in which theſe Plants are placed in *Winter*, ſhould be kept to *Anana*'s Heat (as mark'd on Mr. *Fowler*'s *Thermometers*;) and during that Seaſon they ſhould be frequently refreſh'd with Water, which muſt be plac'd in the Stove at leaſt twenty-four Hours before it be uſed, that it may have nearly an equal Warmth to the Air of the Stove; but you muſt not give it to them in large Quantities, which will rot their Roots, and cauſe them to decay: You muſt alſo obſerve to pick off all decay'd Leaves which may appear at that Seaſon; which, if not taken off, will harbour Inſects, to the great Prejudice of the Plants.

But where there is not the Conveniency of a good Stove to preſerve theſe Plants through the *Winter*, their Seeds may be annually procured, and a few Plants rais'd, which may be kept in a Hot-bed under Glaſſes, where they will continue until the Cold approaches in *Autumn*, and, being a great Curioſity, are worthy of Care in every good Garden.

MINT; *vide* Mentha.

MIRABILIS PERUVIANA; *vide* Jalapa.

MISLETOE; *vide* Viſcum.

MITELLA; American Sanicle.

The *Characters* are;

It hath a perennial Root: The Cup of the Flower conſiſts of one Leaf, and is divided into five Parts: The Flower conſiſts of five Leaves, which expand in Form of a Roſe: *The Ovary becomes a roundiſh Fruit, which terminates in a Point, gaping at the Top, in Form of a Biſhop's Mitre, and full of roundiſh Seeds.*

The *Species* are;

1. MITELLA; *Americana, florum petalis integris. Tourn.* American *Mitella*, whoſe Flower-leaves are intire.

2. MITELLA; *Americana, florum petalis fimbriatis. Tourn.* American *Mitella*, with fringed Flower Leaves.

3. MITELLA; *Americana, flore ſquallidè purpureo, villoſo. Boerh. Ind.* American *Mitella*, with hairy Flowers, of a dirty purple Colour.

4. MITELLA; *Americana, maxima, Tinctoria Inſt. R. H.* American *Mitella*, whoſe Seed is uſed in Dying, *commonly call'd* Anotto or Arnotta in America.

The three firſt Sorts are preſerv'd in curious Botanick Gardens for Variety; but there being very little Beauty in their Flowers, they are ſeldom propagated in Gardens for Pleaſure. They are very hardy, and will thrive in almoſt any Soil or Situation, and may be propagated either from Seeds, or by parting their Roots, which may be done either in Spring or Autumn, in the manner as is practis'd for *Polyanthus's*, &c. and being planted in a ſhady Situation, will grow very vigorouſly; ſo that, for the Sake of Variety, a few Roots may be admitted in ſhady Borders where few better Plants will thrive.

The fourth Sort grows in the warmeſt Parts of *America*, where it riſes to the Height of ſixteen Feet, and produces large Bunches of Flowers, which are ſucceeded by rough Pods, in which are contain'd many red Seeds. The Seeds of this Plant are uſed for dying a Chocolate Colour, and by ſome are uſed in Medicine.

This Plant may be rais'd from the Seeds which are brought frequently to *England*. They muſt be ſown on a Hot-bed, and when the Plants are come up, they muſt be tranſplanted each into a ſmall Pot filled with light Earth, and plunged into a Hot-bed of Tanners-Bark, obſerving to water and ſhade 'em until they have taken root, after which they muſt be treated in the ſame manner as hath been directed for the *Anona*, to which the Reader is referr'd, to avoid Repetition.

MOLDAVICA; Turkey Balm.

The *Characters* are;

It is a Plant with a labiated Flower, conſiſting of one Leaf, whoſe Upper-lip is arch'd, cut into two Parts, and reflex'd: The Under-lip is alſo divided into two Parts, both ending in border'd Jaws: The Flower-cup is hollow, and generally cut into two unequal Lips, out of which ariſes the Pointal, attended with four Embryo's, which afterwards become ſo many oblong Seeds.

The *Species* are;

1. MOLDAVICA; *betonicæ folio, flore cœruleo. Tourn.* Turkey Balm, with a Betony Leaf, and a blue Flower.

2. MOLDAVICA; *betonicæ folio, flore albo. Tourn.* Turkey Balm, with a Betony Leaf, and a white Flower.

3. MOLDAVICA; *betonicæ folio, flore purpuro-cœruleo. Tourn.* Turkey Balm, with a Betony Leaf, and a purpliſh blue Flower.

4. MOLDAVICA; *Orientalis, betonicæ folio, flore magno, violaceo. T.*

Cor. Eaſtern *Moldavica,* with a Betony Leaf, and a large Violet-colour'd Flower.

5. MOLDAVICA; *Orientalis, ſalicis folio, flore parvo cæruleo. T. Cor.* Eaſtern *Moldavica,* with a Betony Leaf, and a large whitiſh Flower.

6. MOLDAVICA; *Orientalis, ſalicis folio, flore parvo cæruleo. T. Cor.* Eaſtern *Moldavica,* with a willow Leaf, and a ſmall blue Flower.

7. MOLDAVICA; *Orientalis, ſalicis folio, flore parvo albo. T. Cor.* Eaſtern *Moldavica,* with a willow Leaf, and a ſmall white Flower.

8. MOLDAVICA; *Americana, trifolia, odore gravi. Tourn.* Three-leav'd American *Moldavica,* with a ſtrong Scent, *commonly call'd* The Balm of Gilead.

The ſeven firſt *Species* are annual Plants, which periſh ſoon after they have perfected Seeds: Theſe may be propagated by ſowing their Seeds in *March,* upon a Bed of freſh light Earth, in a warm Situation; and when the Plants are come up about two Inches high, they ſhould be tranſplanted into the Borders of the Pleaſure-Garden, obſerving to water 'em until they have taken Root: After which they will require no farther Care but to keep them clear from Weeds; and if they grow pretty tall, to ſupport them with Sticks, to prevent their being broken by Winds.

In *June* and *July* they will produce their Flowers; and in *Auguſt* their Seeds will be perfected, when they muſt be gather'd, and preſerv'd dry for the ſucceeding Spring.

The Seeds may alſo be ſown upon a warm Border in *Auguſt,* where the Plants will come up ſoon after, and will endure the Cold of our ordinary Winters very well, provided they have a dry Soil, and a warm Situation.

In the Spring they may be tranſplanted out into the Borders where they are deſign'd to be continu'd, where they will flower early, and produce good Seeds; whereas it ſometimes happens, that if the Seaſon proves cold and wet, thoſe Plants which are ſown in the Spring do not perfect their Seeds.

There is no very great Beauty in theſe Plants; but as they require little Culture, ſo they may be admitted into large Borders of the Flower-Garden, where being intermix'd with other Plants, they afford an agreeable Variety. The moſt valuable Sorts are the two Oriental Kinds with large Flowers; theſe commonly grow about eighteen Inches high, and divide into ſeveral Branches, but do not take up much Room; and being annual Plants, there will be no Danger of their injuring others that may grow near them.

The eighth Sort is an abiding Plant, which may be eaſily propagated by planting Cuttings, during any of the Summer Months, in a Border of rich Earth, obſerving to water and ſhade 'em until they have taken Root, which they do commonly in about three Weeks time; after which they will require no farther Care than only to keep them clear from Weeds, 'till they have made conſiderable Progreſs, when they ſhould be taken up, preſerving a Ball of Earth to each Plant, and ſet into Pots fill'd with freſh light Earth, placing them in a ſhady Situation until they have taken freſh Root; after which, they may be expos'd to the open Air until the Middle or Latter-end of *October,* when they muſt be remov'd into Shelter, otherwiſe they will be liable to ſuffer by hard Froſts: Tho' they ſhould be plac'd where they may enjoy as much free Air as poſſible in mild Weather, and only require to be protected from ſevere Cold; for in moderate Winters I have had them endure abroad very well, when planted under a warm Wall.

They will require frequently to be water'd when planted in Pots; but in the Winter you ſhould not let 'em have it in great Quantities, which will be apt to rot their Roots, and deſtroy 'em. This laſt *Species* is preſerv'd in ſeveral Gardens, for its Oddneſs, and the ſtrong balſamick Scent which the Leaves emit, upon being bruis'd; which gave occaſion to many Perſons formerly to ſuppoſe the *Balm of Gilead* was taken from this Plant.

MOLLE: The Indian Molle, *or* Maſtick Tree.

The *Characters* are;

It hath pinnated Leaves, like thoſe of the Lentiſcus, *but are terminated by an odd Lobe; the Flower expands in the Form of a Roſe; and the Fruit reſembles a Grain of Pepper.*

We have but one *Species* of this Tree in *England*, which is,

MOLLE; *Cluſ. in Monard.* The Arbor Molle, *or* Indian Maſtick Tree.

This Tree is preſerved in many curious Gardens in *England*, but rarely produces any Flowers in this Country.

It may be propagated by laying down the tender Branches, which in two Years will take Root, when they may be taken off from the old Plants, and planted into Pots fill'd with freſh, light Earth, obſerving to water and ſhade 'em until they have taken Root.

But as it is very difficult to make this Tree grow from Layers, ſo it will be neceſſary to ſlit the Branches when lay'd, which will facilitate their Rooting; and when you cut them off from the old Plants (which ſhould be done in *April*) if you place the Pots upon a moderate Hot-bed, it will cauſe them to take Root much ſooner, provided you water and ſhade 'em carefully; but you muſt obſerve to let them have Air in Proportion to the Warmth of the Seaſon; and when they have taken freſh Root; you muſt inure them to the open Air by Degrees, into which they ſhould be removed toward the latter End of *May*, placing 'em in a Situation where they may be defended from violent Winds, in which they may remain until the *October* following, when they muſt be removed into the Green-houſe, placing them where they may have a great Share of free Air in mild Weather, for they only require to be protected from ſevere Cold.

This Tree will grow to the Height of ſeven or eight Feet, but commonly produces its Shoots very irregular, ſo that it is very difficult to form it to a regular Head, for which Reaſon it is not ſo much eſteem'd (except by the Curious in *Botany*) as the *Lentiſcus*; but for Variety it may have a Place in all curious Green-houſes.

MOLUCCA; Molucca Balm.

The *Characters* are;

It is a verticillate Plant with a labiated Flower, conſiſting of one Leaf, whoſe upper Lip is hollow, like a Spoon, but the under Lip is cut into three Segments; out of the Flow-

er-cup ariſes the Pointal, attended, as it were, by four Embryo's, which afterwards turn to ſo many angular Seeds, which are incloſ'd in the Bell-ſhap'd Calyx.

The *Species* are;

1. MOLUCCA; *lævis. Dod.* Smooth *Molucca* Balm.

2. MOLUCCA; *ſpinoſa. Dod.* Prickly *Molucca* Balm.

Theſe Plants are annual, ſeldom abiding after they have perfected their Seeds. They are preſerved only in ſuch Gardens where a great Variety of Plants are maintain'd, being Plants of no great Beauty or Uſe. Theſe may be propagated by ſowing their Seeds in *March*, upon a Bed of freſh, light Earth, in an open Situation, where the Plants will come up ſoon after; and when they are about two Inches high, they muſt be tranſplanted out, either into freſh Beds of light Earth, or in the Borders of the Pleaſure-Garden, placing 'em at two Feet Diſtance, for their Branches will extend pretty far, if the Soil be rich; and when they have taken Root they will require no farther Care, but only to keep 'em clear from Weeds, and faſten them to Sticks to prevent their being broke by Winds when they advance.

In *July* theſe Plants will flower, and if the Seaſon proves warm, their Seeds will be perfected in *September*, but if the Seaſon be cold and moiſt, they commonly periſh without producing good Seeds in this Country: For which Reaſon theſe Plants ſhould be rais'd in *Autumn*, and preſerved through the Winter under a common Frame, and in the Spring tranſplanted out, as before, when they will flower early, and produce good Seeds.

MOLY; Wild Garlick.

The *Characters* are;

It agrees in every reſpect with the Garlick, *but hath, for the moſt part, a ſweet Scent; and the Flowers are produced in an Umbel.*

The *Species* are;

1. MOLY; *latifolium, Liliflorum. C. B. P.* Broad-leav'd *Moly* of Theophraſtus.

2. MOLY; *latifolium, Indicum. C. B. P.* Broad-leav'd Indian *Moly*.

3. MOLY; *latifolium Hiſpanicum. C. B. P.* Broad-leav'd Spaniſh *Moly* with purple Flowers.

4. MOLY; *latifolium, flavo flore. H. Eyſt.* Broad-leav'd yellow *Moly*.

5. MOLY; *anguſtifolium, umbellatum. C. B. P.* Narrow-leav'd *Moly, commonly call'd* Homer's, *or* Dioſcorides's *Moly.*

6. MOLY; *anguſtifolium, foliis reflexis. C. B. P.* Narrow-leav'd *Moly*, with reflex'd Leaves, *commonly call'd* The Serpent *Moly.*

7. MOLY; *moſchatum, capillaceo folio. C. B. P.* The ſweet *Moly* of Montpelier, *vulgò.*

There are ſome other Varieties of this Plant, which are preſerv'd in curious *Botanick* Gardens abroad, but thoſe here mention'd are what I have obſerved in the *Engliſh* Gardens.

They are all very hardy Plants, and may be eaſily multiplied by their Off-ſets, which they ſend forth in great Plenty: The beſt Seaſon to tranſplant them is in *Auguſt* or *September*, juſt after their Leaves decay; for if they are permitted to remain long after, and the Seaſon ſhould prove moiſt, they will ſend forth freſh Fibres, when it will be too late to remove 'em, unleſs they are taken up with Balls of Earth.

They will grow in almoſt any Soil or Situation, but will thrive beſt in a light, ſandy Soil, and an open Expoſure.

They commonly produce their Flowers in *May* and *June*, except the *Sweet-ſcented Montpelier* kind, which ſeldom flowers till *Auguſt*, and are pretty Varieties in the large Borders of the Pleaſure-Garden, where, being intermix'd with other bulbous-rooted Flowers, they afford an agreeable Variety; but they ſhould not be permitted to remain longer than two Years before they are tranſplanted, becauſe they produce a great Number of Off-ſets, (eſpecially *Homer*'s *Moly*) which, if not taken from the old Roots, will ſtarve 'em and cauſe their Flowers to be very weak.

MOMORDICA: Male Balſam-Apple.

The *Characters* are;

The Flower conſiſts of one Leaf, is of the expanded, bell-ſhap'd kind, but ſo deeply cut, as to appear compos'd of five diſtinct Leaves: Theſe Flowers are ſome Male, (or barren), others Female, growing upon the Top of the Embryo, which is afterwards chang'd into a Fruit, which is fleſhy, and ſometimes more or leſs tapering, and hollow; and when ripe, uſually burſts, and caſts forth the Seeds with an Elaſticity; which Seeds are wrapped up in a membranous Covering, and are, for the moſt part, indented on their Edges.

The *Species* are;

1. MOMORDICA; *vulgaris. Tourn.* The common Male Balſam-Apple.

2. MOMORDICA; *Zeylanica, pampinea fronde, fructu breviori. Tourn.* Male Balſam-Apple of Ceylon, with Vine-leaves and a ſhort Fruit.

3. MOMORDICA; *Zeylanica, pampinea fronde, fructu longiori. Tourn.* Male Balſam-Apple of Ceylon, with Vine-leaves and a longer Fruit.

4. MOMORDICA; *Americana, fructu reticulato, ſicco. Com. Rar.* Male Balſam-Apple, of America, with a dry netted Fruit.

Theſe Plants are all annual, their Seeds muſt be ſown on a Hot-bed the Beginning of *March*, and when the Plants come up, they ſhould be tranſplanted out into a freſh Hot-bed, after the Manner of *Cucumbers* or *Melons*, putting two Plants of the ſame kind, under each Light, and the Plants water'd and ſhaded until they have taken Root; after which they muſt be treated as *Cucumbers*, permitting their Branches to extend upon the Ground in the ſame Manner, and obſerve to keep them clear from Weeds.

With this Management (provided you do not let them have too much Wet, or expoſe 'em too much to the open Air) they will produce their Fruit in *July*, and their Seeds will ripen in *Auguſt*, when you muſt obſerve to gather it as ſoon as you ſee the Fruit open, otherwiſe it will be caſt abroad, and with Difficulty gather'd up again.

Theſe Plants are preſerv'd in curious Gardens for the Oddneſs of their Fruit; but as they take up a great deal of Room in the Hot-beds, require frequent Attendance, and are of little Beauty or Uſe, they are not much cultivated in *England*, except in *Botanick* Gardens for Variety.

MORUS: The Mulberry-Tree.

The *Characters* are;

It hath large, rough, roundiſh Leaves; the Male Flowers (or Katkins, which have a Calyx conſiſting of four Leaves) are ſometimes produced upon ſeparate Trees, at other times at remote Diſtances from the Fruit on the ſame Tree: The Fruit is compos'd of ſeveral Protuberances, *to each of which adhere four ſmall Leaves; the Seeds are roundiſh, growing ſingly in each Protuberance.*

The *Species* are;

1. Morus; *fructu nigro. C. B. P.* The common Black Mulberry.

2. Morus; *fructu albo. C. B. P.* The White Mulberry.

3. Morus; *fructu nigro, minori, foliis eleganter laciniatis. Tourn.* The leſſer Black Mulberry, with Leaves neatly jagged.

4. Morus; *fructu albo, minori, ex albo purpuraſcente. Tourn.* The ſmall Purpliſh-white Mulberry.

5. Morus; *Virginiana, foliis latiſſimis ſcabris, fructu rubro longiori. Cat. Plant. Hort.* The broad-leav'd Virginian Mulberry, with long red Fruit.

6. Morus; *Virginienſis arbor, Loti arboris inſtar ramoſa, foliis ampliſſimis. Pluk. Phyt.* The large-leav'd Virginian Mulberry, with blackiſh Shoots, ſomewhat like thoſe of the Lote *or* Nettle-Tree.

The firſt of theſe Sorts is very common in moſt Gardens, being planted for the Delicacy of its Fruit: It may be propagated by ſowing the Seeds, or by laying down the tender Branches, which in two Years will take Root, and may then be tranſplanted into the Places where they are to remain. Thoſe Plants which are propagated from Seeds are commonly the moſt vigorous, and generally make the ſtraiteſt Stems, but then there is a very great Hazard of their being fruitful; for it often happens, that ſuch Plants are, for the moſt part, of the *Male* kind, which produce *Katkins*, but ſeldom have much Fruit; for which Reaſon, thoſe who are deſirous to have fruitful Trees, ſhould always propagate them by Layers from ſuch Trees as do produce Plenty of good Fruit. But as the Trees thus rais'd are ſubject to have crooked, unſightly Stems, ſo there ſhould be Care taken in the Choice of ſtrait Shoots to make Layers; and when they are tranſplanted out, they ſhould have ſtrait Stakes fix'd down by each, to which they ſhould be faſten'd as the Shoot is extended, until it comes to the Height you deſign the Stem; then you may ſuffer the Branches to extend as they are inclinable, for this Tree ſhould not be often prun'd, but only ſuch Branches ſhould be cut off which ſhoot croſs, and bruiſe themſelves by rubbing againſt each other, and ſuch as decay ſhould alſo be cut off.

This Tree delights in a light Soil, not too wet nor over dry, and ſhould have an open Expoſure; for if it be planted too near to other Trees or Buildings, ſo as to be ſhaded thereby, the Fruit ſeldom ripens well; though if they are planted in a Situation where they may be defended from the violent *Weſt* and *South-Weſt* Winds, which very often blow down and deſtroy great Quantities of the Fruit, it will be of great Advantage; but they ſhould always be open to the *Eaſt* and *South-Eaſt* Sun, which is of great Service in drying up the Moiſture which lodges upon the Surface of their Leaves in the Night, and not only retards the Fruit, but renders it ill-taſted and watry.

The Soil under theſe Trees ſhould alſo be every Year well dug and manured, tho' there will ſcarce a Sorts of Plants grow under the but it is of great Advantage to t Fruit, notwithſtanding what m have been ſaid to the contrary.

The *White Mulberry* is commo cultivated for its Leaves, to fe

Sil

wms. In *France*, *Italy*, &c. 1 the *Perſians* always make the common *Black Mulberry* t Purpoſe; and I have been l by a Gentleman of Honour, ath made Trial of both Sorts ves, that the Worms fed with of the Black Sort, produce better Silk than thoſe fed he White; but he obſerves, e Leaves of the Black Sort never be given to the Worms, hey have eaten for ſome time White, leſt the Worms ſhould which is often the Caſe when re thus treated.

Trees which are deſign'd to ilk-worms, ſhould never be l to grow tall, but rather kept rt of Hedge, and inſtead of off the Leaves ſingly, they be ſhear'd off together with young Branches, which is ſooner done, and not ſo in- to the Tree.

White Sort may be propa- either from Seeds or Layers, *Black Mulberry*, and is equally ly: There are two or three es of this Tree, which differ Shape of their Leaves, Size, lour of their Fruit; but as e of no other Uſe than for eaves, ſo the ſtrongeſt ſhoot- l the largeſt-leav'd Sort ſhould err'd.

Large-leav'd Virginian Sort, ong red Fruit, is at preſent arce in *England*, though it to be the common Sort, grows ſpontaneouſly in the of *America*: This may be ated from Seeds, or by lay- wn the Branches, as the com- ort; it is very hardy, and dure the Cold of our Winters open Air very well. The of this kind are very large, and ſeem to be as proper for feeding of Silk-Worms as thoſe of the common Sort; ſo that if ever the Project of eſtabliſhing a *Silk Manufactory* in the *Weſt-Indies* ſhould be ſet on foot, there would be no Occaſion of their ſending over for *Mulberry-Trees*, as hath been by ſome propos'd, ſince they will find a ſufficient Quantity in all the Woods of that Country.

The *Large-leav'd Virginian Mulberry* with black Shoots, is ſtill more uncommon than any of the former: There is a large Plant of this kind growing in the Gardens of the Biſhop of *London* at *Fulham*, which has been ſeveral Years an Inhabitant of that Garden, but has never produced any Fruit, that I could learn, but hath ſome Years a great Number of *Katkins*, much like thoſe of the *Hazel-Nut*, which occaſion'd Mr. *Ray* to give it the Name of *Corylus*; but it may be one of the Male Trees, which never produces Fruit, as it ſometimes happens in the common Sorts of *Mulberries*, the Leaves being very like thoſe of the *Black Mulberry*, but ſomewhat larger and rougher.

This Tree has not been propagated yet in this Country, for though it has been budded and grafted upon both the *Black* and *White Mulberries*, yet I can't hear that it hath ſucceeded upon either; and the Tree being pretty tall, can't be laid down, which is the moſt likely Method to propagate it: This is very hardy, and will endure the Cold of our Climate in the open Air very well, and is coveted as a Curioſity by ſuch who delight in the Variety of Trees and Shrubs.

MOSS; *vide* Muſcus.

MOTHERWORT; *vide* Cardiaca.

MOULD, the Goodneſs of which may be known by the Sight, Smell, and Touch.

Firſt, by the *Sight*. Thoſe *Moulds* that are of a bright *Cheſnut* or *Hazelly* Colour are accounted the beſt; of this Colour are the beſt Loams, and alſo the beſt natural Earth; and this will be the better yet, if it cut like Butter, and does not ſtick obſtinately, but is ſhort, tolerably light, breaking into ſmall Clods, is ſweet, will be tempered without cruſting or chapping in dry Weather, or turning to Mortar in wet.

The next to that, the dark-grey and ruſſet *Moulds* are accounted the beſt: The light and dark Aſh Colour are reckon'd the worſt, ſuch as are uſually found on common or heathy Ground; the clear tawney is by no Means to be approved; but that of a yellowiſh red Colour is accounted the worſt of all; this is commonly found in wild and waſte Parts of the Country, and, for the moſt part, produces nothing but *Goſs*, *Furz*, and *Fern*, according as its Bottom is more or leſs of a light and ſandy, or of a ſpewy Gravel or clayey Nature.

Secondly, by the *Smell*. All Lands that are good and wholſome, will, after Rain or breaking up by the Spade, emit a good Smell.

Thirdly, by the *Touch*. By this Means we may diſcover whether it conſiſts of Subſtances intirely arenaceous or clammy, or, according as it expreſs'd by Mr. *Evelyn*, whether it be tender, fatty, deterſive, or ſlippery, or more harſh, gritty, porous, or friable.

That being always the beſt that is between the two Extreams, and does not contain the two different Qualities of ſoft and hard mix'd, of moiſt and dry, of churliſh and mild, that is, neither too unctuous or too lean, but ſuch as will eaſily diſſolve; of a juſt Conſiſtence, between Sand and Clay, and ſuch as will not ſtick to the Spade or Fingers upon every Flaſh of Rain.

A *Loam* or *Brick Mould* is not to be diſapprov'd, as requiring little Help or Improvement but the Spade, and is eſteemed both by the Gardener and Floriſt.

MULBERRY; *vide* Morus.

MULLEIN; *vide* Verbaſcum.

MUSA: The Plantain-Tree.

The *Characters* are;

Muſa *is a kind of Plant with a polypetalous, anomalous Flower; the upper Petal is excavated or hollowed like a little Boat, and divided into three at the Summit; the hither one is concave, but the inward one pellated, or in the Form of a Creſcent or Half-moon Shield, and accompanied with two little narrow-pointed Leaves: The Calyx paſſes into a Cucumber-ſhap'd Fruit, that is ſoft, fleſhy, covered with a Skin, divided, as it were, into three Loculaments, in which there appear, as it were, ſome Rudiments of Seeds.*

The *Species* are;

1. MUSA; *fructu cucumerino, longiori. Plum. Nov. Gen.* The Plantain-Tree, *vulgo*.

2. MUSA; *candice maculato, fructu recto, rotundo, breviore, odorato. Sloan. Cat.* The Banana-Tree, *vulgo*.

Theſe Plants are very common in the *Eaſt* and *Weſt-Indies*, as alſo in moſt hot Countries of the World. They are carefully cultivated by the *Planters* in the *Weſt-Indies*, who plant 'em in low, rich Ground, by the Sides of Gullies, where they produce Fruit moſt Parts of the Year. In *England* they are only preſerved as Curioſities, where they muſt be conſtantly kept in a Bark-Stove; for though they may be kept alive in another warm Stove, yet they will make very little Progreſs therein, and do not appear half ſo beautiful, their chief Ornament being the Largeneſs of their Leaves, which are ſometimes four Feet long, and near two Feet broad; but as theſe Plants take up a great deal of Room in the Stove, eſpecially when they arrive to a conſiderable Size, ſo it is not convenient to keep more than one Plant of each kind.

During the Summer Seaſon theſe Plants muſt be plentifully water'd, for the Surface of their Leaves being large, occaſions a great Conſumption of Moiſture, by Perſpiration, in hot Weather; but in the *Winter* they muſt be water'd more ſparingly, though at that Seaſon they muſt be often refreſh'd, but it muſt not be given 'em in ſuch Quantities.

The Pots in which theſe Plants are placed ſhould be large, in proportion to the Size of the Plants, for their Roots generally extend pretty far; and the Earth ſhould be rich and light. The Degree of Heat with which theſe Plants thrive beſt, is much the ſame with the *Anana*, or *Pine-Apple*, in which I have ſeen this Plant twelve or fourteen Feet high, but never could obſerve any Tendency to produce Fruit, tho' I believe they may be brought to Fruit in ſome of the lofty Stoves which have been lately erected near *London*.

Theſe Plants are eaſily propagated, by cutting off an old Plant near the Ground, which will occaſion their ſhooting out ſeveral young ones from the Root; which is the Manner they are propagated in the hot Countries; ſo that after a Spot of Ground is once planted with 'em, they will continue ſeveral Years; for the old Plant producing one large Bunch of Fruit from the Center, when that is ripe and cut off, the whole Plant decays, and ſeveral young ones ſpring up from the Roots, which being produced one after another, ſucceſſively, afford the Inhabitants Plants of various Size and Age, which produce their Fruit ſucceſſively, in like manner.

It is the firſt of theſe *Species* which is chiefly cultivated in the *Weſt-Indies*, that producing a much larger Bunch of Fruit, is by the Inhabitants greatly preferr'd to the other, which is accounted a very pleaſant Fruit, when ripe, and is by many Perſons greatly coveted by way of Deſert, being ſofter and more luſcious to the Taſte, but is not ſo much eſteem'd for Food.

Theſe Plants riſe to be fifteen or twenty Feet high in the *Weſt-Indies*, to which Height they generally arrive in about ten Months from their firſt planting, ſoon after which they produce their Fruit, and then decay: They are of the quickeſt Growth of any Vegetable yet known. Sir *Hans Sloane* ſays, one may almoſt ſee them grow; he cut a young Tree even at the Top with a Knife, which immediately grew up diſcernably, and in an Hour's Time the middle Leaves, which were wrapped up within the others, were advanced above them half an Inch.

MUSCARI: Musk, *or* Grape Hyacinth; *vulgo*.

The *Characters* are;

It hath a bulbous Root, the Leaves are long and narrow, the Flower is hermaphroditical, conſiſting of one Leaf, and ſhap'd like a Pitcher, and cut at Top into ſix Segments which are

are reflex'd; the Ovary becomes a triangular Fruit, divided into three Cells, which are full of round Seeds.

The *Species* are;

1. MUSCARI; *arvenſe, juncifolium, minus, cœruleum. Tourn.* Common leſſer blue Grape-flower, *or Muſcary.*

2. MUSCARI; *arvenſe, juncifolium, exalbidum, minus. Tourn.* Leſſer whitiſh Grape-flower, *or Muſcary.*

3. MUSCARI; *obſoletiore flore, ex purpura virente. Cluſ.* Musk Hyacinth *or* Grape-flower, of a worn-out purple-greeniſh Colour.

4. MUSCARI; *cœruleum, majus. Tourn.* Greater blue *Muſcary or* Grape-flower.

5. MUSCARI; *arvenſe, latifolium, purpuraſcens. Tourn.* Broad-leav'd *Muſcary or* Grape-flower, with a purpliſh Flower.

6. MUSCARI; *panniculâ comoſâ, purpuro-violaceâ. Boerh. Ind.* The feather'd Hyacinth; *vulgò.*

There are ſome other Varieties of this Plant which are preſerv'd in the curious Flower-Gardens in *Holland* and *Flanders*, but thoſe here mention'd are what I have obſerv'd in the *Engliſh* Gardens.

The firſt Sort is very common in moſt old Gardens, where, by its plentiful Increaſe, it is become ſo troubleſome as to render it little eſteem'd; for when once theſe Roots have taken Poſſeſſion of a Garden, they are ſcarcely ever eradicated afterward; the ſmalleſt Off-ſets growing, although they are buried a Foot under the Surface of the Ground. This produces its Flowers in *April* and *May*, and if permitted to remain, will produce ripe Seeds in *June*.

The ſecond Sort is leſs common than the firſt, and is preſerved by ſuch who are curious in Flowers, though it is a Plant of no great Beauty; this is propagated by Off-ſets, as the common *Hyacinth*, and will thrive in almoſt any Soil or Situation, but beſt in that which is warm and dry.

The third Sort is a very deſpicable Flower, to Appearance, but is chiefly preſerv'd for its uncommon Sweetneſs; this is alſo increas'd as the former, and produces its Flowers much about the ſame Seaſon.

The fourth, fifth, and ſixth Sorts are alſo preſerved in curious Gardens for Variety, but neither of theſe have much Sweetneſs in their Flowers; theſe are alſo propagated by Off-ſets as the former, but produce their Flowers later in the Seaſon.

The proper Seaſon for taking up the Roots of theſe Flowers is in *June*, when their Leaves are decay'd; at which Time they ſhould be ſpread upon Mats, in a dry Place, for a Fortnight, until their Bulbs be dry'd, when they may be laid up, each Sort by itſelf, until the Beginning of *October*, which is the Seaſon for Planting moſt of theſe bulbous-rooted Flowers; and the various Sorts of theſe may then be intermix'd amongſt other Flowers of the ſame Growth, where, in the Seaſon of their Flowering, they afford an agreeable Variety. Theſe Roots ſhould never be permitted to remain longer than two Years unremoved, for they multiply ſo faſt, that the Number of their Off-ſets would greatly weaken the blowing Roots, and cauſe their Flowers to be very ſmall; and the firſt Sort, which increaſes ſo plentifully, would fill the Borders with Off-ſets, ſo as not to be clear'd out again.

MUSCUS; Moſs.

Theſe, though formerly ſuppos'd to be only Excreſcences produced from the Earth, Trees, *&c.* yet are

perfect Plants than thoſe of
Magnitude, having Roots,
ɛs, Flowers, and Seeds, but
not be propagated from the
y any Art.

Botaniſts diſtinguiſh theſe
veral *Genera*, under each of
are ſeveral *Species*; but as
e Plants of no Uſe or Beauty,
ould be to no purpoſe to enu-
them in this Place.

ſe Plants chiefly flouriſh in
'ountries, and in the Winter
, and are many times very
us to Fruit-Trees, which
upon cold, barren Soils, or
they are ſo cloſe planted as
lude the free Acceſs of Air:
aly Remedy in ſuch Caſes is
down Part of the Trees, and
up the Ground between
left remaining, and in the
of the Year, in moiſt Wea-
rou ſhould, with an Iron In-
nt made a little hollow, the
to ſurround the Branches of
ees, ſcrape off the Moſs, car-
it off the Place; and by two
e times thus cleanſing them,
er with carefully ſtirring the
d, it may be entirely deſtroy'd
he Trees: But if you do not
wn part of the Trees, and
e Ground well, the rubbing
: Moſs will ſignify little, for
uſe not being remov'd, the
will not ceaſe, but the Moſs
n a ſhort Time, be as trou-
le as ever.

SHROOMS; are, by many
s, ſuppos'd to be produc'd
the Putrefaction of the Dung,
&c. in which they are found;
twithſtanding this Notion is
generally received amongſt
thinking Part of Mankind,
y the curious Naturaliſts, they
eem'd perfect Plants, though
Flowers and Seeds have not, as yet, been diſcover'd. But ſince they may, and are annually propagated by the Gardeners near *London*, and are (the eſculent Sort of them) greatly eſteem'd, by moſt curious Palates, ſo I ſhall briefly ſet down the Method practis'd by the Gardeners who cultivate them for Sale.

But, firſt, it will not be improper to give a ſhort Deſcription of the true eatable Kind, ſince there are ſeveral unwholſome Sorts which have been, by unskilful Perſons, gather'd for the Table.

The true *Champignion*, or *Muſhroom*, appears at firſt of a roundiſh Form, like a Button, the upper Part of which, as alſo the Stalk, is very white, but being open'd, the under Part is of a livid Fleſh-colour, but the fleſhy Part, when broken, is very white: when theſe are ſuffer'd to remain undiſturb'd, they will grow to a large Size, and explicate themſelves almoſt to a Flatneſs, and the red Part underneath will change to a dark Colour.

In order to cultivate them, if you have no Beds in your own, or in neighbouring Gardens, which produce them, you ſhould look abroad in rich Paſtures, during the Months of *Auguſt* and *September*, until you find 'em (that being the Seaſon when they are produced) then you ſhould open the Ground about the Roots of the *Muſhrooms*, where you will find the Earth, very often, full of ſmall white Knobs, which are the Off-ſets or young *Muſhrooms*; theſe ſhould be carefully gather'd, preſerving them in Lumps with the Earth about them; then being provided with a Parcel of new Horſe-dung, you ſhould ſhake out the Litter, if there be any amongſt it, and caſt it up into a Heap, for ſeven or eight Days, to heat; then you ſhould dig a Trench about three Feet wide, and in Length, according to the Quantity of *Muſhrooms* required, or the Plenty of Earth you can procure for that Purpoſe, into which you ſhould lay the Dung about a Foot thick, covering it over with light rich Earth, about ſix or eight Inches, into which, on each Side, you ſhould put in ſome of the Knobs of *Muſhroom* Earth, about ſix Inches aſunder.

Then make another Layer of Dung upon this Earth, as before, about eight or ten Inches thick, obſerving to draw in the Sides, ſo as not to bury the Knobs of *Muſhroom* Earth above half an Inch; then put another Laying of Earth, placing ſome Knobs on the Sides, as before, and put a third Laying of Dung thereon, ſtill drawing it in narrower, and cover this with Earth, ſo as to bring it to a Ridge, ſtill placing ſome Knobs of the *Muſhroom* Earth into the Sides, all the Way up; then cover the Bed all over with dry Litter, about half a Foot thick, to prevent the Earth from drying too faſt, as alſo to keep out the Wet, if there ſhould happen to be Rain; and this Litter will retain the moiſt Vapour which ariſes from the Fermentation of the Dung, and is of great Service in promoting the Growth of the *Muſhrooms*; for it is obſerved, that too much Drowth or over Moiſture is deſtructive to them, but a *Medium* between both is abſolutely neceſſary for their Production.

When your Bed has been made a Week, you muſt carefully look over it, (by drawing off the Litter with your Hands) to ſee if the *Muſhrooms* begin to appear; for if they are permitted to remain long in the Bed after they are large enough for Uſe, they will rot, and infect all the young Spawn, or Offſets, ſo that all that Part of the Bed where they rot, will be entirely ſpoil'd. After they once begin to produce, the Bed muſt be diligently ſearch'd every Day, during their chief Seaſon of Growth, which is commonly in *Auguſt* and *September*, but at other Times, every other Day, in order to gather all ſuch as are fit for Uſe; in doing of which you ſhould pull them gently out of the Ground, ſo that no Part of their Stems be left behind, which will engender Worms, whereby the young Spawn will be deſtroy'd; but if in pulling them up, there ſhould any of the Spawn adhere to their Roots, that ſhould be gently taken off, being careful not to bruiſe it, and thruſt into the Bed again, where it will ſoon fix.

As the Cold increaſes in Autumn, ſo you ſhould increaſe the Quantity of your Litter over the Beds, to preſerve 'em from that and Wet, which if not guarded againſt, will ſoon retard the Growth of the *Muſhrooms*, and ſpoil the Beds for a future Crop.

A Bed thus manag'd, if the Spawn takes kindly, will continue good for ſeveral Months, and produce great Quantities of *Muſhrooms*; from theſe Beds you take the Spawn for a freſh Supply, which may be laid up in a dry Place until the proper Seaſon of uſing it, which is towards the latter End of *July* or the Beginning of *Auguſt*, and it will be the better for the Purpoſe, if kept dry three or four Months, as I have experienced; nay, I have had it ſucceed extremely well, after having been kept in a warm dry Place above ſix Months.

MUSTARD; *vide* Sinapi.

MYOSOTIS: Mouſe-ear Chickweed.

The *Characters* are;

It hath the whole Appearance of Chickweed; but the Flower is larger, and the Fruit is ſhap'd like an Ox's horn, gaping at the Top, and full of ſmall round Seeds.

The *Species* are;

1. Myosotis; *Hiſpanica, ſegetum. Tourn.* Spaniſh Corn Mouſe-ear'd Chickweed.

2. Myosotis; *Alpina, latifolia. Tourn.* Broad-leav'd Mouſe-ear Chickweed of the Alps.

3. Myosotis; *Orientalis, perfoliata, folio lychnidis. Flor.* Eaſtern Thorough-wax, Mouſe-ear Chickweed, with a Campion Leaf.

There are ſeveral other Varieties of this Plant, which are preſerved in curious Botanick Gardens; but as they are of little Beauty or Uſe, ſo I ſhall omit mentioning them in this Place. Theſe may be propagated by ſowing their Seeds in *March*, upon a Bed of light freſh Earth, in an open Situation, where they may remain to flower and ſeed, being careful to clear them from Weeds, as alſo to pull up the Plants where they come up too thick; but they do not ſucceed well if tranſplanted, ſo that they ſhould always remain where they are ſown.

MYRRHIS; Sweet Cicely.

The *Characters* are;

It is an umbelliferous Plant, with a Roſe-ſhap'd Flower, conſiſting of ſeveral unequal Petals, or Flower Leaves, that are placed circularly, and reſt upon the Empalement; which turns to a Fruit, compos'd of two Seeds, reſembling a Bird's-bill, channell'd and gibbous on one Side, but plain on the other.

The *Species* are;

1. Myrrhis; *magno ſemine, longo ſulcato. J. B.* Sweet Cicely, *or* Great Sweet Chervil, and by ſome, Sweet Fern.

2. Myrrhis; *annua, ſemine, ſtriato, villoſo, incano. M. Umb.* Annual Sweet Cicely, with hairy ſtriated Seeds, by ſome call'd Candy Carrot.

3. Myrrhis; *Orientalis, folio anguſtiori peucedani, ſemine villoſo. Boerh. Ind.* Eaſtern Sweet Cicely, with a narrow Sulphur-wort Leaf and hairy Seeds, *or* the True Candy Carrot.

There are many more Sorts of this Plant preſerved in the Gardens of ſuch as are curious in Botany, but as they are Plants of little Uſe or Beauty, ſo I thought it not neceſſary to enumerate them in this Place.

The firſt mention'd is an abiding Plant, which is ſometimes uſed in Medicine: This may be propagated by ſowing the Seeds in *February*, upon a Bed of light, rich Earth, in a ſhady Situation; and when the Plants come up, they ſhould be tranſplanted out into the like rich Earth, in a moiſt ſhady Situation, at about two Feet aſunder, for they ſpread very wide, and take up much Room, (eſpecially if they are permitted to remain two or three Years unremoved); after the Plants have taken Root they will require no farther Care, but to keep 'em clear from Weeds, and they will endure ſeveral Years, and produce great Quantities of Seeds. By which, as alſo by parting the old Roots, they may be greatly increas'd.

The Seeds of the ſecond Sort are moſt commonly ſold in the Shops for thoſe of the *Daucus Creticus*; but it is the third Sort which is generally accounted the true *Daucus Creticus*: The Seeds of which are us'd in ſome of the capital Medicines of the Shops.

Theſe may be propagated by ſowing their Seeds in the Spring upon a Border of light Earth, expos'd to the Morning-Sun, in which the Plants will riſe in about ſix Weeks after; when they may be tranſplanted out into Beds of light Earth, obſerving to water and ſhade them until they have taken Root; after which they will require no farther Care but only to keep them clear from Weeds: The Summer following theſe Plants will produce Flowers and Seeds; ſoon after which, the ſecond Sort will decay; but the third will ſometimes abide two or three Years, and produce Seeds annually.

MYRTUS; The Myrtle.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves diſpos'd in a circular Order, which expand in Form of a Roſe; *upon the Top of the Foot-ſtalk is the Ovary, which has a ſhort Star-like Cup, divided at the Top into five Parts, and expanded; the Ovary becomes an oblong umbilicated Fruit, divided into three Cells, which are full of Kidney-ſhap'd Seeds.*

The *Species* are;

1. Myrtus; *communis, Italica. C. B. P.* Common *Myrtle*, with pretty large Leaves.

2. Myrtus; *latifolia, Romana. C. B. P.* Common Broad-leav'd *Myrtle.*

3. Myrtus; *minor, vulgaris. C. B. P.* Thyme-leav'd *Myrtle*; vulgò.

4. Myrtus; *folio Buxi. Schuyl. Boerh. Ind.* Box-leav'd *Myrtle*; vulgò.

5. Myrtus; *foliis minimis & mucronatis. C. B. P.* Roſemary-leav'd *Myrtle*; vulgò.

6. Myrtus; *flore pleno. Corn.* Double-flowering *Myrtle*; vulgò.

7. Myrtus; *foliis odore Nucis Moſchatæ, cauliculis rubentibus, vulgò odore Citri. Schuyl. Boerh. Ind.* The Nutmeg *Myrtle*; vulgò.

8. Myrtus; *Bætica, anguſtifolia Cluſ.* Narrow-leav'd Spaniſh *Myrtle, commonly call'd,* The Upright *Myrtle.*

9. Myrtus; *balſamica, foliis Mali Granatæ. H. L.* The Pomegranate-leav'd *Myrtle.*

10. Myrtus; *latifolia Bætica ſecunda, vel foliis Laurinis confertim naſcentibus. C. B. P.* The Orange-leav'd *Myrtle*; vulgò.

11. Myrtus; *minor, foliis ex albo, variegatis.* The Strip'd Thyme-leav'd *Myrtle.*

12. Myrtus; *foliis odore Nucis Moſchatæ, cauliculis rubentibus, foliis ex luteo variegatis.* The Strip'd Nutmeg *Myrtle*; vulgò.

13. Myrtus; *foliis mucronatis, ex albo & viridi variegatis, floſculis rubro candidis. Boerh. Ind.* The Strip'd Thyme-leav'd *Myrtle*; vulgò.

14. Myrtus; *latifolia, Romana, foliis ex luteo variegatis.* The Broad-leav'd *Myrtle*, with ſtrip'd Leaves.

There are ſome other Varieties of theſe Plants which are preſerv'd in the Gardens of the Curious, but thoſe here mention'd are what I have obſerv'd in the Gardens near *London.*

Theſe Plants may be all propagated from Cuttings; the beſt Seaſon for which is in *July*, when you ſhould make Choice of ſome of the ſtraiteſt and moſt vigorous young Shoots, which ſhould be about ſix or eight Inches long, and the Leaves on the Lower Part muſt be ſtripp'd off about two Inches long, and the Part twiſted which is to be plac'd in the Ground: Then having fill'd a Parcel of Pots (in Proportion to the Quantity of Cuttings deſign'd) with light rich Earth, you ſhould plant the Cuttings therein at about two Inches Diſtance from each other, obſerving to cloſe the Earth faſt about them, and give them ſome Water to ſettle it to the Cuttings; then place the Pots under a common Hot-bed Frame, plunging them either into ſome old Dung or Tanners-Bark, which will prevent the Earth from drying too faſt; but you muſt carefully ſhade them with Mats in the Heat of the Day, and give them Air in Proportion to the Warmth of the Seaſon, not forgetting to water them every two or three Days, as you ſhall find the Earth in the Pots require it: With this Management, in about a Month's Time, the Cuttings will be rooted, and begin to ſhoot; when you muſt inure 'em to the open Air by degrees, into which they ſhould be remov'd towards the latter End of *Auguſt*, placing them in a Situation where they may be ſhelter'd from cold Winds, in which place they may remain till *October*; when the Pots ſhould be remov'd into the Green-houſe, but ſhould be plac'd in the cooleſt Part thereof, that they may have Air given to them whenever the Weather is mild, for they require only to be protected from ſevere Cold, except the *Orange-leav'd*, and the ſtrip'd *Nutmeg Myrtles*, which are ſomewhat tenderer than the reſt, and ſhould have a warmer Situation.

During the Winter-ſeaſon they muſt be frequently water'd, and if any decay'd Leaves appear, they ſhould be conſtantly pick'd off, as alſo the Pots kept clear from Weeds, which, if permitted to grow, will ſoon overſpread the young Plants and deſtroy them.

The *March* following theſe Plants ſhould be taken out of the Pots very carefully, preſerving a Ball of Earth to the Roots of each of them, and every one ſhould be placed into a ſeparate ſmall Pot fill'd with rich light Earth, obſerving to water them well to ſettle the Earth to their Roots, and place them in the ſhady Part of the Green-houſe until they have taken Root, after which they ſhould be inur'd to the Sun and Air; and in *May* they muſt be expos'd to the open Air, obſerving to place them near Hedges, where they may be defended from ſtrong Winds.

During the Summer-ſeaſon they will require to be plentifully water'd, eſpecially being in ſuch ſmall Pots, which in that Seaſon ſoon dries, therefore you ſhould obſerve to place them where they may have only the Morning-Sun, for when they are too much expos'd to the Sun in the Heat of the Day, the Moiſture contain'd in the Earth of thoſe ſmall Pots will ſoon be exhal'd, and the Plants greatly retarded in their Growth thereby.

In *Auguſt* following you ſhould examine your Pots, to ſee if the Roots of the Plants have not made Way out through the Hole in the Bottom of the Pots; which if you obſerve, you muſt then ſhift them into Pots a Size bigger, filling them up with the like rich Earth, and obſerve to trim the Roots which were matted to the Side of the Pots, as alſo to looſen the Earth from the Outſide of the Ball with your Hands, ſome of which ſhould be taken off, that the Roots may the eaſier find Paſſage into the freſh Earth; then you muſt water them well, and place the Pots in a Situation where they may be defended from ſtrong Winds: And at this time you may trim the Plants, in order to reduce them to a regular Figure; and if they are inclinable to make crooked Stems, you ſhould thruſt down a ſlender ſtrait Stick cloſe by them, to which their Stems ſhould be faſten'd, ſo as to bring 'em upright.

If Care be taken to train them thus while they are young, the Stems afterwards, when they have acquired Strength, will continue ſtrait without any Support, and their Branches may be prun'd, ſo as to form either Balls or Pyramids; which for ſuch Plants as are preſerv'd in the Green-houſe, and require to be kept in ſmall Compaſs, is the beſt Method to have them handſome: But then theſe ſheer'd Plants will not produce any Flowers; for which Reaſon that Sort with double Flowers ſhould not be clipp'd, becauſe the chief Beauty of that conſiſts in its Flowers: But it will be neceſſary to ſuffer a Plant or two of each Kind to grow rude, for the Uſe of their Branches in Noſegays, *&c.* for it will greatly deface thoſe which have been conſtantly ſheer'd to cut off their Branches.

As theſe Plants advance in Stature, ſo they ſhould annually be remov'd into larger Pots, according to the Size of their Roots, but you muſt be careful not to put them in Pots too large, which will cauſe them to ſhoot weak and ſtraggling, and many times proves the Deſtruction of them; therefore when they are taken out of the former Pots, the Earth about their Roots ſhould be pared off, and that withinſide the Ball muſt be gently looſen'd, that the Roots may not be too cloſely confin'd; and then place them into the ſame Pots again, provided they are not too ſmall, filling up the Sides and Bottom of them with freſh rich Earth, and giving them plenty of Water to ſettle the Earth to their Roots, which ſhould be frequently repeated, for they require to be often water'd both in Winter and Summer; but in hot Weather they muſt have it in Plenty.

The beſt Seaſon for ſhifting theſe Plants, is either in *April* or *Auguſt*, for if it be done much ſooner in the Spring, the Plants are then in a ſlow growing State, and ſo not capable to ſtrike out freſh Roots again very ſoon: And if it be done later in Autumn, the cold Weather coming on will prevent their taking Root; nor is it adviſeable to do it in the great Heat of Summer, becauſe they will require to be very often water'd, and alſo to be plac'd in the Shade, otherwiſe they will be liable to miſcarry: And that being the Seaſon when theſe Plants ſhould be plac'd amongſt other Exoticks to adorn the ſeveral Parts of the Garden, theſe Plants being then remov'd, could not be expos'd until they have taken Root again, which at that time (if the Seaſon be hot and dry) will be three Weeks or a Month.

In *October*, when the Nights begin to have Froſts, you ſhould remove the Plants into the Green-houſe; but if the Weather proves favourable in Autumn, (as it often happens) they may remain abroad until the Beginning of *November*; for if they are carry'd into the Green-houſe too ſoon, and the Autumn ſhould prove warm, they will make freſh Shoots at that Seaſon, which will be weak, and often decay in Winter, if the Weather ſhould be ſevere, whereby they will be greatly defac'd; for which Reaſon they ſhould always be kept as long abroad as the Seaſon will permit, and remov'd out again in the Spring before they ſhoot out; and during the Winter-ſeaſon that they are in the Green-houſe, they ſhould have as much free Air as poſſible when the Weather is mild.

The two firſt mention'd Sorts I have ſeen planted abroad in warm Situations, and upon a dry Soil, where they have endured the Cold of Winters for ſeveral Years very well, with only being cover'd in very hard Froſts with two or three Mats, and the Surface of the Ground about their Roots cover'd with a little Mulch to prevent the Froſt from entering the Ground: But in *Cornwall* and *Devonſhire*, where the Winters are more favourable than in moſt other Parts of *England*, there are large Hedges of *Myrtle* which have been planted ſeveral Years, and are very thriving and vigorous, ſome of which are upward of ſix Feet high; and I believe if the Double-flowering Kind were planted abroad, it would endure the Cold as well as any of the other Sorts, it being a Native of the Southern Parts of *France*. This and the *Orange-leav'd* Kind, are the moſt difficult to take Root from Cuttings; but if they are planted toward the latter end of *July*, making Choice of only ſuch Shoots as are tender, and the Pots be plung'd into an old Bed of Tanners Bark which has loſt moſt of its Heat, and the Glaſſes ſhaded every Day, they will take Root extreamly well, as I have more than once experienc'd. The *Orange-leav'd* Sort, and thoſe with variegated Leaves are ſomewhat tenderer than the ordinary Sorts, and ſhould be hous'd a little ſooner in *Autumn*, and plac'd farther from the Windows of the Green-houſe.

MYRTUS BRABANTICA; *vide* Gale.

N A

NAPELLUS; *vide* Aconitum.

NAPUS; The Navew *or* French Turnip.

The *Characters* are;

It agrees in moſt reſpects with the Turnip, but hath a leſſer Root, and ſomewhat warmer to the Taſte.

The *Species are;*

1. Napus; *ſativa, radice alba.* C. B. P. Garden Navew, with a white Root.
2. Napus; *ſativa, radice nigra.* C. B. P. Garden Navew, with a black Root.
3. Napus; *ſylveſtris.* C. B. P. Wild Navew.

The two firſt *Species* of this Plant are cultivated in *France*, *Italy*, and *Germany*, in great Abundance; in which Places they are much preferr'd to common *Turnips*, being accounted a more delicious Food; but in *England* they have not yet ſo much obtain'd, being only cultivated by ſome curious Perſons, and are but rarely brought to the Markets.

Theſe Plants may be cultivated by ſowing their Seeds in *June*, *July*, and *Auguſt*, after the ſame manner as is practis'd for common *Turnips*; and when the Plants are come up, they ſhould be hoed in the like manner to deſtroy the Weeds, and cut up the Plants where they come up too thick, with this Difſerence only, *viz.* that theſe may be left cloſer together than common *Turnips*, for neither their Leaves nor Roots do grow near ſo large: The Plants being thus clear'd from Weeds, and cut up where they are too thick, will require no farther Care until they are fit for Uſe, which (if the Seaſon proves favourable) will be in about two Months after they are ſown, when they muſt be drawn up, and treated as common *Turnips*. The wild Sort is pretty common upon dry Banks in moſt Parts of *England*, where it flowers early in the Spring, but is never cultivated in Gardens; but in the Iſle of *Ely* it is very much cultivated, it being the Cole Seed from which they draw an Oyl: The Seeds of this Kind are us'd in Medicine, and by moſt preferr'd to thoſe of the Garden Sort.

NARCISSO-LEUCOJUM; The Snow-drop; *vulgò*.

The *Characters* are;

The Flower is for the moſt part compos'd of ſix Leaves in form of a Lily, *which are ſometimes equal, and ſometimes unequal and pendulous: The Empalement becomes a roundiſh Fruit, which is divided into three Cells, and full of roundiſh Seeds: To which may be added, It hath a bulbous Root.*

The *Species* are;

1. Narcisso-Leucojum; *trifolium, minus. Tourn.* Leſſer Bulbous-violet *or* Snow-drop.

2. Narcisso-Leucojum; *vulgare. Tourn.* Common Bulbous-violet *or* Snow-drop.

3. Narcisso-Leucojum; *trifolium, minus, flore pleno. Boerh. Ind.* The Double Snow-drop.

4. Narcisso-Leucojum; *trifolium, majus. Tourn.* Greater Snow-drop *or* Bulbous-violet.

5. Narcisso-Leucojum; *altiſſimum, flore parvo albo, apicibus viridibus. Boerh. Ind.* The talleſt Snow-drop, with ſmall white Flowers tipp'd with Green.

The firſt of theſe Plants is very common in moſt *Engliſh* Gardens, where it is preſerv'd for its early flowering, which is generally in *January*, when they often appear, though the Ground at that time be cover'd with Snow, and is one of the firſt Uſherers in of the Spring.

This Plant is very eaſily propagated from Off-ſets, which the Roots ſend forth in great Plenty (eſpecially if they are permitted to remain undiſturb'd for two or three Years) in which time, from a ſingle Bulb, there will often be ten or twelve flowering Roots, and as many more ſmall Off-ſets.

The beſt Seaſon for tranſplanting the Roots is in *May*, after their Leaves are decay'd, when they muſt be taken up; and after being dry'd in a ſhady Place, they may be kept out of the Ground until *September* before they need be planted again; when they ſhould be planted about two Inches deep, and pretty cloſe together, otherwiſe their Flowers being ſmall, will make but a poor Appearance.

They will thrive in almoſt any Soil or Situation, but are commonly planted near Hedges, and by the Sides of large Walks; where being permitted to remain two or three Years unremov'd, till they have increas'd, and become large Bunches, they make a very good Appearance before any other Flowers come up.

The Double Sort is preferr'd to the Single, for the Largeneſs and Fairneſs of its double Flowers. This may be propagated as the laſt;

laſt, but does not multiply quite ſo faſt, nor do the Flowers appear ſo ſoon in the Spring, but they are of longer Duration.

The Great *Snow-drop* is pretty rare in *England*, and only to be found in ſome curious Gardens. This produces much larger Flowers than the common Sort, and generally riſes eight or ten Inches high. It flowers toward the latter-end of *February* or the Beginning of *March*, and continues a long time in Beauty. This is alſo propagated by Off-ſets as the former, but does not increaſe very faſt: It requires a middling Soil which is freſh, but ſeldom thrives well in very rich Ground, and ſhould be planted to an *Eaſt* or *South-Eaſt* Aſpect, where it may have the Morning-Sun; in which Situation it will thrive better than if expos'd to a greater Heat.

The talleſt *Snow-drop* is a very hardy Plant, and increaſes pretty faſt by Off-ſets, ſo that it is much commoner than the laſt. This flowers in *April* and *May*, and generally riſes two Feet high. The Bulbs of this Kind are very large, and do greatly reſemble thoſe of the *Narciſſus*, and the Leaves are very broad, but the Flowers are ſmall, and ſeldom more than two or three produc'd upon each Stalk. Theſe make a pretty Variety when intermix'd with other bulbous rooted Flowers.

All theſe Sorts may be tranſplanted when their Leaves are decay'd, before they ſtrike out freſh Fibres, after which it will be too late to remove them: Their Roots may be kept out of the Ground two or three Months, if preſerv'd in a dry Place, and may be planted in almoſt any Soil, but they thrive beſt in a freſh light ſandy Earth.

NARCISSUS; The Daffodil.

The *Characters* are;

It hath a Lily *Flower, conſiſting of one Leaf, which is Bell-ſhap'd, and cut into ſix Segments, which incircle its Middle like a Crown; but the Empalement, which commonly riſes out of a membranous* Vagina, *turns to an oblong or roundiſh Fruit, which is triangular; and gapes in three Parts, is divided into three Cells, and full of roundiſh Seeds.*

The *Species* are;

1. NARCISSUS; *ſylveſtris, pallidus, calyce luteo. C. B. P.* Wild Engliſh Daffodil.

2. NARCISSUS; *medio-luteus, vulgaris. Park.* Common Pale Daffodil, *or* Primroſe Peerleſs.

3. NARCISSUS; *major, totus, luteus, calice prælongo. C. B. P.* Great Yellow Spaniſh Daffodil, with a long Cup.

4. NARCISSUS; *latifolius, omnium maximus, amplo calice, flavo, ſive Nonpareille. Park. Par.* The Great Nonpareil *or* Nonſuch Daffodil.

5. NARCISSUS; *parvus, totus luteus. C. B. P.* Small Yellow Spaniſh Daffodil.

6. NARCISSUS; *luteus, florum petalis reflexis. C. B. P.* Yellow Daffodil, with the Leaves of its Flowers turning back.

7. NARCISSUS; *multiplex, totus flavus. C. B. P.* Common Yellow Daffodil, with a double Flower.

8. NARCISSUS; *incomparabilis, flore pleno, partim flavo, partim croceo. H. R. Par.* The incomparable Double Daffodil, with the Flower-leaves partly yellow, and partly of a Saffron Colour.

9. NARCISSUS; *latifolius, flore pleniſſimo, petalis majoribus candidis, minoribus aureis interpolatis. Boerh. Ind.* Nonſuch Daffodil, with a very double Flower, whoſe larger Leaves are white, but the leſſer

Leaves (which are intermix'd) of a Gold Colour.

10. Narcissus; *latifolius, flore pleniſſimo, petalis majoribus pallidis, minoribus flavis interpolatis. Boerh. Ind.* Nonſuch Daffodil, with a very double Flower, whoſe larger Leaves are of a pale Colour, which are intermix'd with ſmaller Leaves of a yellow Colour.

11. Narcissus; *latifolius, flore pleniſſimo, petalis partim flavis, partim viridibus interpolatis.* Broad-leav'd Daffodil, with a very double Flower, whoſe Leaves are ſome yellow, and others green, intermix'd, *commonly call'd* Tradeſcant's Daffodil.

12. Narcissus; *Anglicus, flore pleno.* The Double Engliſh Daffodil.

13. Narcissus; *latifolius, ſulphureus vel albus, brevi calice. C. B. P.* Broad-leav'd Daffodil, with a Brimſtone-colour'd Flower, having a ſhort Cup.

14. Narcissus; *latifolius, ſulphureus, calicis brevis, aurei, orâ fimbriatâ. Boerh. Ind. Alt.* Broad-leav'd Brimſtone-colour'd Daffodil, with a ſhort Gold-colour'd Cup fring'd about the Edge.

15. Narcissus; *Illyricus, Liliaceus. C. B. P.* The Sea Daffodil, *or* Narciſſus tertius Matthioli.

16. Narcissus; *maximus, pallidus, foliis incanis. C. B. P.* Greater Pale-colour'd Daffodil.

17. Narcissus; *albus multiplex. Park. Par.* The Double white Daffodil, or *Narciſſus.*

18. Narcissus; *albus, circulo croceo. C. B. P.* The White Daffodil, with the Rim of the Cup of a Saffron Colour.

19. Narcissus; *Narbonenſis, ſive medio luteus, ſerotinus major. Park. Par.* The Great late flowering French Daffodil.

20. Narcissus; *Orientalis, albus, calice luteo campanulæ ſimilis maximus. C. B. P.* The Boſſelman's *Narciſſus*; vulgô.

21. Narcissus; *Orientalis, albus, calice luteo, medius. C. B. P.* Oriental White Daffodil, with a yellow Cup.

22. Narcissus; *luteus, polyanthos, Luſitanicus. C. B. P.* Yellow Portugal Daffodil, with many Flowers.

23. Narcissus; *Orientalis, albus, minor, calice ſulphureo pallido amplo. Boerh. Ind.* Leſſer white Oriental many-flower'd Daffodil, with an ample pale Brimſtone-colour'd Cup.

24. Narcissus; *pallidus, medio aureus. C. B. P.* Pale Daffodil, with a Golden Cup, *commonly call'd* Le Soleil D'Or.

25. Narcissus; *Orientalis, albus, calice luteo, minor. C. B. P.* Leſſer White Oriental Daffodil, with a yellow Cup.

26. Narcissus; *Orientalis, albus, calice ſtellato. C. B. P.* Oriental White Daffodil, with a ſtarry Cup.

27. Narcissus; *Orientalis, lacteus, maximus, calice pallido amplo. Boerh. Ind.* Largeſt Oriental White Daffodil, with an ample pale Cup, *commonly call'd,* The Czar of Muſcovy.

28. Narcissus; *Orientalis, maximus, lacteus, calice pallido parvo. Boerh. Ind.* Greateſt White Oriental *Narciſſus,* with a ſmall pale-colour'd Cup.

29. Narcissus; *Orientalis, major, polyanthos, totus albus. H. Eyſt.* Great Oriental *Narciſſus,* with many white Flowers upon a Stalk.

30. Narcissus; *Orientalis, medius, polyanthos, totus albus. H. Eyſt.* Middle Oriental *Narciſſus,* with many white Flowers upon a Stalk.

31. Narcissus; *Orientalis, minor, polyanthos, totus albus. H. Eyſt.* Leſſer Oriental *Narciſſus*, with many white Flowers upon a Stalk.

32. Narcissus; *Juncifolius, oblongo calice, luteus, major. C. B. P.* Single Yellow Jonquil, with a large oblong Cup.

33. Narcissus; *Juncifolius, luteus minor. C. B. P.* Leſſer ſingle Yellow Jonquil.

34. Narcissus; *Juncifolius, flore pleno. Cluſ. Cur. Poſt.* Double Yellow Jonquil.

35. Narcissus; *Juncifolius, petalis anguſtiſſimis, calice maximo tubam referente. Boerh. Ind.* Ruſh-leaf'd Daffodil, with very narrow Petals, and a large tubulous Cup, *commonly call'd*, the Hoop-Petticoat.

36. Narcissus; *Juncifolius flore pallidiore, calice flavo. C. B. P.* Ruſh-leaf'd Daffodil, with a paler Flower, and a yellow Cup.

There are ſeveral other Varieties of theſe Flowers, which are annually brought over from *Holland* and *Flanders*, where the Gardeners are very induſtrious in raiſing theſe and moſt other Bulbous-rooted Flowers from Seeds, whereby they continually procure ſome new Varieties, which recompences them for their Trouble and Expence. But in *England* there are very few Perſons who have Patience to propagate any of theſe Flowers that Way, it being commonly five Years before they can expect to ſee the Fruits of their Labour: however, after the firſt five Years are paſt, if there be Seeds ſown every Year, there will be annually a Succeſſion of Flowers to ſhew themſelves; ſo that there will be a continual Expectation, which will take off the Tediouſneſs which during the firſt five Years, might be very troubleſome to ſome Perſons; and the annual Production of new Flowers correſponding to the annual Sowing, it will be as if the Product aroſe ſoon after.

The not practiſing this Method, has occaſion'd our ſending Abroad annually for great Quantities of Flower-Roots, which have been kept up to a great Price, on account of the great Demand for 'em in *England*; whereas if we were as induſtrious to propagate them as our Neighbours, we might ſoon vie with them, if not out-do 'em, in moſt Sorts of Flowers; as may be eaſily ſeen, by the vaſt Variety of *Carnations*, *Auricula's*, *Ranuncula's*, &c. which are what have been produc'd from Seeds in *England*, and do exceed every thing of thoſe Kinds in any Part of *Europe*.

I ſhall therefore firſt lay down the Method of propagating theſe Flowers from Seeds; and afterwards proceed to the neceſſary Directions for increaſing them from Off-ſets; with the manner of treating the Roots, to produce ſtrong Flowers.

You muſt be very careful, in ſaving your Seeds, to gather none but from ſuch Flowers as have good Properties, and particularly from ſuch only as have many Flowers upon a Stalk, that flower tall, and have beautiful Cups to their Flowers; from ſuch you may expect to have good Flowers produc'd: But if you ſow ordinary Seed, it is only putting your ſelf to Trouble and Expence to no Purpoſe; ſince from ſuch Seeds there can be no Hopes of procuring any valuable Flowers.

Having provided your ſelf with good Seeds, you muſt procure either ſome ſhallow Caſes or flat

Pans made on purpoſe for the raiſing of Seedlings, which ſhould have Holes in their Bottoms to let the Moiſture paſs off; theſe muſt be fill'd with freſh light ſandy Earth about the Beginning of *Auguſt* (this being the beſt Seaſon for ſowing the Seeds of moſt Bulbous-rooted Flowers) which muſt be levell'd very even; then ſow the Seeds thereon pretty thick, covering 'em over with fine ſifted light Earth about half an Inch thick, and place the Caſes or Pans in a Situation where they may have only the Morning Sun 'till about Ten o'Clock, where they ſhould remain until the Beginning of *October*, when they muſt be removed into a warmer Situation, placing 'em upon Bricks, that the Air may freely paſs under the Caſes, which will preſerve them from being too moiſt.

They ſhould alſo be expos'd to the full Sun, but ſcreen'd from the cold *North* and *Eaſt* Winds, where they may remain until the Beginning of *April*, by which time the Plants will be up, when you muſt carefully clear 'em from Weeds; and if the Seaſon ſhould prove dry, they muſt be frequently water'd: The Caſes ſhould alſo now be remov'd into their former ſhady Poſition; for the Heat of the Noon-day Sun will be too great for the young Plants.

The latter-end of *June*, when the Leaves of the Plants are decay'd, you ſhould take off the upper Surface of the Earth in the Caſes (which by that time will have contracted a Moſſineſs, and, if ſuffer'd to remain, will greatly injure the young Roots) obſerving not to take it ſo deep as to touch the Roots; then ſift ſome freſh light Earth over the Surface about half an Inch thick, which will greatly ſtrengthen the Roots: The ſame ſhould alſo be repeated in *October*, when the Caſes are mov'd into the Sun.

During the Summer-ſeaſon, if the Weather ſhould prove very wet, and the Earth in the Caſes appear very moiſt, you muſt remove 'em into the Sun 'till the Earth be dry again; for if the Roots receive much Wet during the time they are unactive, it very often rots them; therefore you muſt never give 'em any Water after their Leaves are decay'd, but only place 'em in the Shade (as was before directed.)

Thus you ſhould manage them the two firſt Seaſons, 'till their Leaves are decay'd the ſecond Summer after ſowing, when you ſhould carefully take up the Roots; which may be done by ſifting the Earth in the Caſes with a fine Sieve, whereby the Roots will be eaſily ſeparated from the Earth; then having prepared a Bed or two of good freſh light Earth, in proportion to the Quantity of your Roots, you ſhould plant 'em therein at about three Inches Diſtance every Way, and about three Inches deep in the Ground.

Theſe Beds ſhould be rais'd above the Level of the Ground, in proportion to the Moiſture of the Soil, which, if dry, three Inches will be enough; but if it be wet, they muſt be rais'd ſix or eight Inches high, and laid a little rounding to ſhoot off the Wet.

If theſe Beds are made in *July*, which is the beſt time to tranſplant the Roots, the Weeds will ſoon after appear very thick; therefore you ſhould gently hoe the Surface of the Ground, to deſtroy 'em; being very careful not to cut ſo deep as to touch any of the Roots; and this ſhould be repeated as often as may be found neceſſary by the Growth of the Weeds, obſerving always to do it in dry Weather, that they may be effectually deſtroy'd: And toward the latter-end of *October*, after having intirely clear'd the Beds from Weeds, you ſhould ſift a little rich light Earth over them about an Inch thick, the Goodneſs of which will be waſh'd down to the Roots by the Winter's Rain, which will greatly encourage their Shooting in the Spring.

If the Cold ſhould be very ſevere in Winter, you ſhould cover the Beds with Peaſe-haulm, or ſome ſuch light Covering, to prevent the Froſt from penetrating the Ground to the Roots, which might greatly injure them while they are ſo young.

In the Spring, when the Plants begin to appear above-ground, you muſt gently ſtir the Surface of the Ground, clearing it from Weeds, *&c.* in doing of which, you ſhould be very careful not to injure the Plants: And if the Seaſon ſhould prove dry, you ſhould now-and-then gently refreſh 'em with Water, which will ſtrengthen the Roots.

When their Leaves are decay'd, you ſhould clear the Beds from Weeds, and ſift a little Earth over 'em (as was before directed;) which muſt alſo be repeated in *October*, in like manner; and ſo every Year continu'd 'till the Roots flower, when you ſhould mark all ſuch as promiſe well, which ſhould be taken up as ſoon as their Leaves decay, and planted at a greater Diſtance in new-prepared Beds: But thoſe which do not flower, or thoſe you do not greatly eſteem, ſhould be permitted to remain in the ſame Bed; therefore, in taking up thoſe Roots which you mark'd, you muſt be careful not to diſturb the Roots of thoſe left, and alſo to level the Earth again, and ſift ſome freſh Earth over the Beds (as before) to encourage the Roots; for it often happens, in the Seedlings of theſe Flowers, that at their firſt time of Blowing, their Flowers do ſeldom appear half ſo beautiful as they do the ſecond or third Year; for which Reaſon none of them ſhould be rejected until they have flower'd two or three times, that ſo you may be aſſured of their Worth.

Thus having laid down Directions for the Sowing and Managing theſe Roots, until they are ſtrong enough to flower; I ſhall proceed to give ſome Inſtructions for Planting and Managing the Roots afterwards, ſo as to cauſe 'em to produce large fair Flowers.

All the Sorts of *Narciſſus* which produce many Flowers upon a Stalk, ſhould have a Situation defended from Winds, otherwiſe they'll be ſubject to be broke down when in Flower; for notwithſtanding their Stalks are generally pretty ſtrong, yet the Number of Flowers upon each, renders their Heads weighty, eſpecially after Rain, which lodges in the Flowers, and, if ſucceeded by ſtrong Winds, very often deſtroys their Beauty, if they are expos'd thereto; ſo that a Border under a Hedge, which is open to the South-Eaſt, is preferable to any other Poſition for theſe Flowers.

The Morning Sun riſing upon them will dry off the Moiſture which had lodged upon them the preceding Night, and cauſe 'em to expand fairer than when they are planted in a ſhady Situation; and if they are too much expos'd to the Afternoon Sun, they will be hurry'd out of their Beauty very ſoon; and the ſtrong Winds uſually coming from the *Weſt* and *South-Weſt* Points, they will be expos'd to the Fury of them, which frequently is very injurious to them. But you ſhould not plant them under a Wall, or any other cloſe Fence; for that will reflect the Heat too greatly upon the Flowers, and alſo draw them up with weak Stems, ſo that they will not flower ſo ſtrong, nor continue ſo long in Beauty.

Having made choice of a proper Situation, you muſt then proceed to prepare the Earth neceſſary to plant them in; for if the natural Soil of the Place be very ſtrong, or poor, it will be proper to make the Border of new Earth, removing the former Soil away about a Foot deep. The beſt Earth for theſe Flowers is a freſh light hazle Loam, mix'd up with a little very rotten Dung, or Tan; this ſhould be well mix'd together, and often turn'd over, in order to ſweeten it: Then having remov'd away the old Earth at leaſt a Foot deep, you ſhould put a Laying of rotten Dung or Tan in the Bottom about two Inches thick, upon which you muſt lay ſome of the prepared Earth about four Inches thick, making it exactly level; then having mark'd out by Line the exact Diſtances which the Roots are to be planted (which ſhould not be leſs than four or five Inches ſquare) you muſt place the Roots accordingly, obſerving to ſet them upright; then you muſt cover them over with the before-mention'd Earth about ſix Inches deep, being very careful, in doing of it, not to diſplace the Roots: When this is done, you muſt rake the Surface of the Border even, and make up the Side ſtrait, which will appear handſome.

The beſt Time for planting theſe Roots is in *Auguſt*; for if they are kept too long out of the Ground, it will cauſe their Flowers to be very weak. You ſhould alſo obſerve the Nature of the Soil where they are planted, and, whether the Situation be wet or dry, according to which you ſhould adapt the freſh Earth, and order the Beds; for if the Soil be very ſtrong, and the Situation moiſt, you ſhould then make choice of a light Earth, and raiſe the Beds ſix or eight Inches above the Level of the Ground, otherwiſe the Roots will be in danger of periſhing by too much Wet: But if the Situation be dry, and the Soil naturally light, you ſhould then allow the Earth to be a little ſtronger: And the Beds ſhould not be rais'd above three Inches high; for if they are made too high, the Roots will ſuffer very much, if the Spring ſhould prove dry, nor would the Flowers be near ſo fair.

Toward the Middle of *October*, if the Weeds have grown upon the Beds, you ſhould, in a dry Day, gently hoe the Surface of the Ground, to deſtroy them, obſerving to rake it over ſmooth again: After which, they will require no farther Care till the Spring, when their Leaves will appear above-ground, at which Time you ſhould gently ſtir the Surface of the Earth, with a ſmall Trowel, being very careful not to injure the Leaves of the Plants, and rake it ſmooth with your Hands, clearing off all Weeds, *&c.* which, if ſuffer'd to remain at that Seaſon, will ſoon grow ſo faſt, as to appear very unſightly, and will exhauſt the Nouriſhment from the Earth. With this Management theſe Roots will flower very ſtrong, ſome of which will appear in *March*, and the others in *April*; which, if ſuffer'd to remain, will continue in Beauty a full Month, and are at that Seaſon very great Ornaments to a Flower-Garden.

After the Flowers are paſt, and the Leaves decay'd, you ſhould ſtir the Surface of the Ground, to prevent the Weeds from growing; and if at the ſame time you lay a little very rotten Dung over the Surface of the Beds, the Rain will waſh down the Salts thereof, which will greatly encourage the Roots the ſucceeding Year.

During the Summer-ſeaſon they will require no farther Care, but to keep them clear from Weeds 'till *October*, when the Surface of the Beds ſhould be again ſtirr'd, raking off all Weeds, *&c.* and laying ſome good freſh Earth over the Beds about an Inch deep, which will make good the Loſs ſuſtain'd by Weeding, *&c.* and in the Spring you muſt manage as was before directed for the preceding Year.

Theſe Roots ſhould not be tranſplanted oftener than every third Year; becauſe the firſt Year after removing they never flower ſo ſtrong as they do the ſecond and third; nor will the Roots increaſe ſo faſt when they are often tranſplanted; but if you let them remain longer than three Years unremov'd, the Number of Off-ſets, which by that Time will be produced, will weaken the large Bulbs, and cauſe them to produce very weak Flowers; therefore, at the time of tranſplanting them, all the ſmall Off-ſets ſhould be taken off, and planted in a Nurſery-bed by themſelves, but the large Bulbs may be planted again for Flowering. If you plant them in the ſame Bed where they grew before, you muſt take out all the Earth a Foot deep, and fill it up again with freſh, in the manner before directed, which will be equal to removing them into another Place: This is the conſtant Practice of the Gardeners in *Holland*, who have but little Room to change their Roots; therefore they every Year remove the Earth of their Beds, and put in freſh, ſo that the ſame Place is conſtantly occupy'd by the like Flowers.

The common Sorts of *Daffodil* are generally planted in large Borders of the Pleaſure-Garden, where being intermix'd with other Bulbous-rooted Flowers, do afford an agreeable Variety in their Seaſons of Flowering: Theſe Roots are very hardy, and will thrive in almoſt any Soil or Situation, which renders 'em very proper for Rural Gardens, where being planted under the Shade of Trees, they will endure ſeveral Years without tranſplanting and produce annually, in the Spring, great Quantities of Flowers, which afford an agreeable Proſpect.

The *Jonquils* ſhould be planted in Beds, or Borders, ſeparate from other Roots; becauſe theſe require to be tranſplanted at leaſt every other Year, otherwiſe their Roots are apt to grow long and ſlender, and ſeldom flower well after; which is alſo the Caſe, if they are continued many Years in the ſame Soil; wherefore the Roots ſhould be often remov'd from one Part of the Garden to another, or at leaſt the Earth ſhould be often renew'd, which is the moſt probable Method to preſerve theſe Flowers in Perfection.

The Soil in which theſe Flowers ſucceed beſt, is a Hazle Loam, neither too light, nor over-ſtiff; it muſt be freſh, and free from Roots of Trees, or noxious Weeds; but ſhould not be dung'd; for 'tis very remarkable, that where the Ground is made rich, they ſeldom continue good very long, but are ſubject to ſhoot downwards, and form long ſlender Roots.

Theſe Flowers are very greatly eſteem'd by many People for their ſtrong ſweet Scent, tho' there be very few Ladies that can bear the Smell of them; ſo powerful is it, that, many times, it overcomes their Spirits, eſpecially if confined in a Room; for which Reaſon they ſhould never be planted too cloſe to an Habitation, leſt they become offenſive; nor ſhould the Flowers be placed in ſuch Rooms where Company is entertain'd.

NASTURTIUM; Creſs.

The *Characters* are;

The Flower conſiſts of four Leaves, which are placed in Form of a Croſs: The Pointal, which ariſes from the Centre of the Flower-cup, becomes a roundiſh ſmooth Fruit, which is divided into two Cells, by the intermediate Partition, obliquely placed, with reſpect to the Valves, and furniſh'd with Seeds, which are generally ſmooth: To which may be added, The Leaves are cut into many Parts, by which Creſs *is diſtinguiſh'd from* Thlaſpi, *or* Treacle-Muſtard.

The *Species* are;

1. NASTURTIUM; *hortenſe, vulgatum. C. B. P.* Common Garden-Creſs.

2. NASTURTIUM; *hortenſe, criſpum. C. B. P.* Curl'd Garden-Creſs.

3. NASTURTIUM; *hortenſe, latifolium. C. B. P.* Broad-leav'd Garden-Creſs.

4. NASTURTIUM; *ſylveſtre, capſulis criſtatis. Tourn.* Swine's-Creſs, *or* Warted Bucks-horn.

The firſt Sort is commonly cultivated in Gardens as a Sallet-herb, and is chiefly eſteem'd in the Winter and Spring, it being one of the warm Kind. During the *Winter* Seaſon, it muſt be ſown upon a gentle Hot-bed, and cover'd with either Mats or Glaſſes, to preſerve it from great Rains or Froſt, both of which are equally deſtructive at that Seaſon: In the *Spring* it may be ſown in warm Borders, where, if it be defended from cold Winds, it will thrive very well: But if you would continue it in Summer, you muſt ſow it upon ſhady Borders, and repeat ſowing every Week, otherwiſe it will be too large for Uſe; for at that Seaſon it grows very faſt.

The *Broad-leav'd* and *Curl'd* Sorts are preſerv'd in ſome Gardens for Curioſity Sake, and to garniſh Diſhes, but the common Sort is equally as good for Uſe. Theſe ſhould be ſown ſomewhat thinner than the common Sort, and when the Plants come up, they ſhould be drawn out, ſo as to leave the remaining ones half an Inch aſunder, whereby they will have Room to expand their Leaves, in which their Difference from the common Sort conſiſts.

In order to preſerve theſe Varieties diſtinct, you muſt carefully ſeparate all ſuch Plants as appear inclin'd to degenerate from their Kinds, leaving only ſuch of the broad-leav'd Kind as have very fair broad Leaves; and ſo of the curl'd Sort, only ſuch as have their Leaves very much curl'd; being very careful not to intermix 'em together. When the Seeds are ripe, the Plants ſhould be drawn up, and ſpread upon a Cloth two or three Days to dry, after which the Seeds ſhould be beaten out, and preſerved in a dry Place for Uſe.

NASTURTIUM INDICUM; *vide* Acriviola.

NECTARINE; Nectarine.

This Fruit ſhould have been placed under the Article of *Peaches*, to which it properly belongs, differing from them in nothing more than in having a ſmooth Rind, and the Fleſh being firmer. Theſe the *French* diſtinguiſh by the Name of *Brugnon*, as they do thoſe *Peaches* which adhere to the Stone, by the Name of *Pavie*'s, retaining the Name of *Peſche* to only ſuch as part from the Stone: But ſince the Writers in Gardening have diſtinguiſh'd this Fruit by the Name of *Nectarine* from the *Peaches*, ſo I ſhall follow their Example, leſt by endeavouring to rectify their Miſtakes, I ſhould render my ſelf leſs intelligible to the Reader. I ſhall therefore mention the ſeveral Sorts of this Fruit which have come to my Knowledge:

1. *Fairchild*'s *Early Nectarine*. This is one of the earlieſt ripe *Nectarines* we have: It is a ſmall round Fruit, about the Size of the *Nutmeg Peach*, of a beautiful red Colour, and well flavour'd; it ripens the Middle of *July*.

2. *Elruge Nectarine* is a middle-ſiz'd Fruit of a dark-red or purple Colour next the Sun, but of a pale yellow or greeniſh Colour towards the Wall; it parts from the Stone, and has a ſoft melting Juice. This ripens in the End of *July*.

3. *Newington Nectarine* is a fair large Fruit (when planted on a good Soil) of a beautiful red Colour next the Sun, but of a bright Yellow towards the Wall; it has an excellent rich Juice, the Pulp adheres cloſely to the Stone, where it is of a deep red Colour. This ripens the Beginning of *Auguſt*.

4. *Scarlet Nectarine* is ſomewhat leſs than the laſt, of a fine red or ſcarlet Colour next the Sun, but loſes it ſelf in paler red towards the Wall. This ripens in the End of *July*.

5. *Brugnon* or *Italian Nectarine* is a fair large Fruit, of a deep red Colour next the Sun, but of a ſoft yellow toward the Wall; the Pulp is firm, of a rich Flavour, and cloſely adheres to the Stone, where it is very red. This ripens in the Middle of *Auguſt*.

6. *Roman Red Nectarine* is a large fair Fruit, of a deep red or purple Colour towards the Sun, but has a yellowiſh Caſt next the Wall; the Fleſh is firm, of an excellent Flavour, cloſely adhering to the Stone, where it is very red. This ripens the Middle of *Auguſt*.

7. *Murry Nectarine* is a middle-ſiz'd Fruit, of a dirty red Colour on the Side next the Sun, but of a yellowiſh green towards the Wall; the Pulp is tolerably well flavour'd. This ripens the Middle of *Auguſt*.

8. *Golden Nectarine* is a fair handſome Fruit, of a ſoft red Colour next the Sun, but of a bright yellow next the Wall; the Pulp is very yellow, of a rich Flavour, and cloſely adheres to the Stone, where it is of a faint red Colour. This ripens the Beginning of *September*.

9. *Temple*'s *Nectarine* is a middle-ſiz'd Fruit, of a ſoft red Colour next the Sun, but of a yellowiſh Green towards the Wall; the Pulp is melting, of a white Colour to-

wards the Stone, from which it parts, and has a fine poignant Flavour. This ripens in the Middle of *September*.

10. *Peterborough* or *late Green Nectarine* is a middle-ſiz'd Fruit, of a pale green Colour on the Outſide next the Sun, but of a whitiſh Green towards the Wall; the Fleſh is firm, and, in a good Seaſon, well flavour'd. This ripens at the End of *September*.

There are ſome Perſons who have mention'd more Sorts than I have here ſet down, but I much doubt whether they are different from thoſe here mention'd, there being ſo near Reſemblance between the Fruits of this Kind, that it requires a very cloſe Attention to diſtinguiſh them well, eſpecially if the Trees grow in different Soils and Aſpects, which many times alters the ſame Fruit ſo much as hardly to be diſtinguiſh'd by Perſons who are very converſant with them; therefore in order to be thoroughly acquainted with their Differences, it is neceſſary to conſider the Shape and Size of their Leaves, the Size of their Flowers, their Manner of Shooting, *&c.* which is many times very helpful in knowing of theſe Fruits.

The Culture of this Fruit differing in nothing from that of the *Peach*, I ſhall forbear mentioning any thing on that Head in this Place, to avoid Repetition, but refer the Reader to the Article *Perſica*, where there is an ample Account of their *Planting*, *Pruning*, &c.

NEPETA; *vide* Cataria.

NERIUM: The Oleander, *or* Roſebay.

The *Characters* are;

The Flowers are monopetalous and Funnel-ſhap'd, divided into five Segments at the Top; out of the Flower-cup ariſes the Pointal, which becomes a taper Fruit, or Pod, divided into two Cells by an intermediate Partition, and filled with flat Seeds which have Down adhering to them.

The *Species* are;

1. Nerium; *floribus rubeſcentibus. C. B. P.* Oleander, with red Flowers.

2. Nerium; *floribus albis. C.B.P.* Oleander, with white Flowers.

3. Nerium; *Indicum anguſtifolium, floribus odoratis ſimplicibus. H. L.* Narrow-leav'd *Indian* Oleander, with ſingle ſweet-ſcented Flowers.

4. Nerium; *Indicum latifolium, floribus odoratis plenis. H. L.* Broad-leav'd *Indian* Oleander, with double ſweet-ſcented Flowers.

5. Nerium; *Indicum flore variegato odorato pleno. H. Amſt.* *Indian* Oleander, with double ſweet-ſcented variegated Flowers, *commonly call'd*, South-Sea Roſe.

The firſt and ſecond Sorts are very common in the *Engliſh* Gardens, where they are preſerv'd in Pots or Tubs, and placed amongſt *Myrtles*, *Oranges*, &c. in the Green-houſe. They are pretty hardy Plants, and only require to be ſheltered from hard Froſt, for in moderate Winters I have known them ſtand abroad in warm Borders, but in hard Froſts they are often deſtroy'd if expos'd thereto.

Theſe may be placed, in Winter, in an ordinary Green-houſe among *Bays*, &c. which require a great Share of free Air, and only want Protection from hard Froſts, where they will thrive better than if placed in a warmer Houſe, or kept too cloſe in Winter. They are propagated from Suckers, which they ſend forth from their Roots in great Plenty, or by laying down their tender Branches, which will take

Root in one Year: The Time for laying them down, is in the Beginning of *April*, and the Year following, the Layers ſhould be taken off, and planted into Pots filled with freſh rich Earth, obſerving to place 'em in the Shade until they have taken Root, after which they may be expos'd with *Myrtles*, *Geraniums*, &c. in ſome Place where they may be ſhelter'd from ſtrong Winds. During the Summer Seaſon they muſt be plentifully water'd, otherwiſe they will make but poor Progreſs, and produce very few Flowers, but if they are conſtantly ſupplied with Water, they will make a fine Appearance during the Months of *July* and *Auguſt*, when they will be covered with Flowers. In Winter they muſt be frequently refreſh'd with Water, but it ſhould not be given them in large Quantities at that Seaſon.

The third, fourth, and fifth Sorts are tenderer than the others, therefore require a warmer Situation in Winter, nor muſt they be expos'd to the open Air in Summer, for if they are placed abroad, their Flowers will not open. So that in Winter they ſhould be placed in a warm Green-houſe, and in Summer they ſhould be remov'd into an airy Glaſs-Caſe, where they may be defended from the Cold of the Nights, but in Day-time they ſhould have ſtore of free Air, obſerving to give 'em plenty of Water, which will cauſe them to produce their Flowers large and in great Quantities. Theſe Plants are Natives of the *Spaniſh Weſt-Indies*, from whence they were brought into the *Engliſh* Colonies in *America*, where they were planted for the Beauty of their Flowers, but ſince the Inhabitants have found it deſtroy their Cattle which have browz'd on the Plants, they uſually deſtroy them near their Settlements.

Theſe Plants may be propagated from Suckers or Layers as the two former, but they do not produce Suckers in ſo great Plenty as thoſe in this Country. They all grow naturally on the Sides of Rivers and moiſt Places, ſo that they muſt have plenty of Water.

NICOTIANA; Tobacco.

The *Characters* are;

The Flower conſiſts of one Leaf, is funnel-ſhap'd, and divided at the Top into five deep Segments, which expand like a Star; the Ovary becomes an oblong or roundiſh membranaceous Fruit, which is divided into two Cells by an intermediate Partition, and is fill'd with ſmall roundiſh Seeds.

The *Species* are;

1. NICOTIANA; *major, latifolia. C. B. P.* The greater broad-leav'd Tobacco.
2. NICOTIANA; *major, anguſtifolia. C. B. P.* The greater narrow-leav'd Tobacco.
3. NICOTIANA; *major, anguſtifolia, perennis. Jeſſieu.* The greater narrow-leav'd perennial Tobacco.
4. NICOTIANA; *minor. C. B. P.* The leſſer *or* common *Engliſh* Tobacco.
5. NICOTIANA; *minor foliis rugoſioribus, amplioribus. Vaill.*

The firſt Sort is known by the Planters in *America* under the Title of *Oroonoko*; of which there ſeems to be two different Kinds, varying in the Largeneſs and Texture of their Leaves, ſome having very broad, rough, roundiſh Leaves; and others are narrower, ſmoother, and do terminate in a Point: But neither of theſe Sorts are eſteem'd by the *American* Planters, becauſe the Produce of this (tho' it is much greater than the narrow-leav'd Sort) yet is not near ſo much eſteem'd by the

Engliſh. This Sort is commonly cultivated in *Germany*, about *Hanover* and *Strasburgh*, and is ſomewhat hardier than the narrow-leav'd Sorts, which renders it preferable to that for cultivating in Northern Climates.

This Plant is order'd by the College of Phyſicians for Medicinal Uſe, and is what ſhould be made uſe of for the *Unguentum Nicotianæ*, (or Ointment of *Tobacco*) though many times the Leſſer or *Engliſh Tobacco* is brought to Market for that Purpoſe.

The narrow-leav'd Sort is commonly call'd, The *Sweet-ſcented Tobacco*, from its having a much more agreeable Scent, when ſmoak'd, than the broad-leav'd Sort; the Smoak of which is very offenſive to moſt Perſons who have not been accuſtomed to it. This Sort is cultivated in great Plenty in *Virginia*, *Cuba*, *Braſil*, and ſeveral other Parts of *America*; from whence it is brought to moſt Parts of *Europe*, but eſpecially to *England*, it being prohibited to be cultivated in this Country, leſt his Majeſty's Revenues ſhould be thereby leſſened: But as a ſmall Quantity is permitted to be cultivated for Medicinal Uſe, I ſhall briefly ſet down the Method how it may be propagated, ſo as to have fair large Leaves for that Purpoſe.

The Seeds of this Plant muſt be ſown upon a moderate Hot-bed in *March*; and when the Plants are come up, they ſhould be tranſplanted into a new Hot-bed of a moderate Warmth, about four Inches aſunder each Way, obſerving to water and ſhade them until they have taken Root; after which you muſt let them have Air in Proportion to the Warmth of the Seaſon, otherwiſe they will draw up very weak, and be thereby leſs capable of enduring the open Air: You muſt alſo obſerve to water them frequently, (but while they are very young it ſhould not be given to them in too great Quantities) though when they are pretty ſtrong they will require to have it often and in plenty.

In this Bed the Plants ſhould remain until the Beginning of *May*; by which time (if they have ſucceeded well) they will touch each other, therefore they ſhould be enur'd to the open Air gradually: after which they muſt be taken up carefully, preſerving a large Ball of Earth to each Root, and planted into a rich light Soil, in Rows two Feet aſunder, and the Plants a Foot Diſtance in the Rows, obſerving to water them until they have taken Root; after which they will require no farther Care (but only to keep them clear from Weeds) until the Plants begin to ſhew their Flower-ſtems; at which time you ſhould cut off the Tops of them, that their Leaves may be the better nouriſhed, whereby they will be render'd larger, and of a thicker Subſtance. In *Auguſt* they will be full grown, when they ſhould be cut for Uſe; for if they are permitted to ſtand longer, their under Leaves will begin to decay.

The Perennial Sort was brought from the *French* Settlements in the *Weſt-Indies* into the *Royal Garden* at *Paris*, where it is cultivated in ſmall Quantities for making Snuff. The Seeds of this kind I receiv'd from Monſieur *de Jeſſieu*, Demonſtrator of the Plants in the Royal Garden: It has ſucceeded very well in the Phyſick Garden, and abides the Winter in a common Green-houſe without artificial Heat.

The two ſmaller Sorts of *Tobacco* are preſerv'd in Botanick Gardens for Variety, but are ſeldom propagated for Uſe. The firſt Sort is found growing upon Dunghills in divers Parts of *England*. Theſe are both very hardy, and may be propagated by ſowing their Seeds in *March*, upon a Bed of light Earth, where they will come up, and may be tranſplanted into any Part of the Garden.

NIGELLA; Fennel-Flower, *or* Devil in a Buſh.

The *Characters* are;

The Flower-cup conſiſts of five Leaves, which expand in Form of a Star, and branch out into many other ſmall narrow Leaves; the Flower conſiſts of many Leaves plac'd orbicularly, and expand in Form of a Roſe, *having many ſhort Stamina ſurrounding the Ovary in the Center of the Flower; which Ovary becomes a membranaceous Fruit, conſiſting of ſeveral Cells, which are furniſh'd with Horns on the Top, and are full of Seeds.*

The *Species* are;

1. NIGELLA; *arvenſis, cornuta.* C. B. P. Wild horned Fennel-Flower.

2. NIGELLA; *latifolia, flore majore, ſimplici, cærulea.* C. B. P. Broad-leav'd Fennel-Flower, with a large ſingle blue Flower.

3. NIGELLA; *anguſtifolia, flore majore, ſimplici, cœruleo.* C. B. P. Narrow-leav'd Fennel-Flower, with a large ſingle blue Flower.

4. NIGELLA; *anguſtifolia, flore majore, ſimplici, albo.* C. B. P. Narrow-leav'd Fennel-Flower, with a large ſingle white Flower.

5. NIGELLA; *flore majore, pleno, cœruleo,* C. B. P. Double blue *Nigella*, or Fennel-Flower.

6. NIGELLA; *flore minore, ſimplici, candido.* C. B. P. Fennel-Flower, with a ſmall white ſingle Flower.

7. NIGELLA; *flore minore, pleno & albo.* C. B. P. Fennel-Flower, with a ſmall double white Flower.

8. NIGELLA; *Orientalis, flore flavo, ſemine alato piano.* T. Cor. Oriental Fennel-Flower, with a yellow Flower, and a flat-wing'd Seed.

9. NIGELLA; *Cretica, latifolia, odorata.* Park. Theat. Broad-leav'd, Sweet-ſcented, Candy Fennel-Flower.

There are ſome other Varieties of this Plant, which are preſerv'd in ſome curious *Botanick* Gardens, but thoſe here mention'd are what I have obſerv'd cultivated in the *Engliſh* Gardens at preſent.

All theſe Plants may be propagated by ſowing their Seeds upon a Bed of light Earth, where they are to remain (for they ſeldom ſucceed well if tranſplanted); therefore in order to have them intermix'd amongſt other annual Flowers, in the Borders of the Flower-Garden, the Seeds ſhould be ſown in Patches at proper Diſtances; and when the Plants come up, you muſt pull up thoſe which grow too cloſe, leaving but three or four of them in each Patch, obſerving alſo to keep them clear from Weeds, which is all the Culture they require. In *July* they will produce their Flowers, and their Seeds will ripen in *Auguſt*, when they ſhould be gather'd, and dry'd; then rub out each Sort ſeparately, and preſerve them in a dry Place.

The Seaſon for ſowing theſe Seeds is in *March*, but if you ſow ſome of them in *Auguſt*, ſoon after they are ripe, upon a dry Soil, and in a warm Situation, they will abide the Winter, and flower ſtrong the ſucceeding Year; by which Method they may be continu'd in Beauty moſt part of the Summer.

The fifth Sort is that which is moſt commonly cultivated in *England*, the Seeds of which are ſold in the Seed Shops, but the other Sorts deſerve to be preſerv'd as much as that; for the various Sorts, when rightly intermix'd, afford an agreeable Variety. They are all annual Plants, which periſh ſoon after they have perfected their Seeds; which if permitted to ſcatter upon the Borders, will come up without any farther Care. The Plants commonly grow about a Foot high, and if they have a good Soil will ſend forth many Branches, each of which terminates in a Flower.

NIGHT-SHADE; *vide* Solanum.

NISSOLIA; Crimſon Graſs-Vetch; *vulgò*.

The *Characters* are;

It hath a papilionaceous Flower, like the Lathyrus, *to which this Plant agrees in every reſpect, excepting the Leaves, which in this are produc'd ſingly, and are not terminated by Claſpers.*

There is but one *Species* of this Plant at preſent known, which is,

NISSOLIA; *vulgaris. Tourn.* Common Crimſon Graſs-Vetch.

This Plant is found wild in ſeveral Parts of *England*, growing commonly by the Sides of Foot-paths, but is not very common near *London*: I have gather'd it in a Field juſt before you come to *Putney-Common*, on the Left-hand Side of the Road, under the Hedge which parts the Field from the Road.

This Plant may be cultivated by ſowing the Seeds in *Auguſt*, ſoon after they are ripe, on a dry Soil, and in a warm Situation, where they will riſe ſoon after, and endure the Cold of our Climate very well, and flower early the ſucceeding Spring; but if you ſow the Seeds in the Spring, the Plants commonly decay before they come to flower, as I have ſeveral times experienc'd: therefore you need only to let the Seeds fall upon the Ground when they are ripe, and they will grow without any farther Trouble, but only to keep them clear from Weeds.

The Flowers of this Plant are ſmaller than thoſe of the Sweet *Pea*, but are much the ſame in Shape, and of a fine ſcarlet Colour, ſo that being intermix'd in large Borders amongſt theſe and other annual Plants, it makes a pretty Variety, and deſerves a Place in every good Garden.

NOLI ME TANGERE; *vide* Balſamina Mas.

NONSUCH, or FLOWER OF BRISTOL; *vide* Lychnis.

NORTHERN ASPECT is the the leaſt favourable of any in *England*, as having very little Benefit from the Sun, even in the Height of Summer, therefore can be of little Uſe, whatever may have been advanc'd to the contrary; for although many Sorts of Fruit-trees will thrive and produce Fruit in ſuch Poſitions, yet ſuch Fruit can be of little Worth, ſince they are depriv'd of the kindly Warmth of the Sun to correct their crude Juices, and render them well-taſted and wholſome. Therefore it is to little Purpoſe to plant Fruit-trees againſt ſuch Walls, except it be thoſe which are intended for Baking, *&c.* where the Fire will ripen and render thoſe Juices wholſome, which for want of Sun could not be perform'd while growing.

You may alſo plant *Morello Cherries* for Preſerving; and *White* and *Red Currants* to come late, after thoſe which are expos'd to the Sun are gone: And if the Soil be warm and dry, ſome Sorts of Summer Pears will do pretty well on ſuch an Expoſure, and will continue longer in eating, than if they were more expos'd to the Sun. But you ſhould by no means plant Winter Pears in ſuch an Aſpect, as hath been practis'd by many ignorant Perſons; ſince we find, that the beſt South Walls, in ſome Years, are barely warm enough to ripen thoſe Fruits.

NUMMULARIA; Money-wort, *or* Herb Two-pence.

This Plant grows wild in ſhady moiſt Places in divers Parts of *England:* But as it is ſeldom cultivated in Gardens, ſo I ſhall ſay nothing of its Culture in this Place.

NURSERY; There is no ſuch thing as having a fine Garden or Plantation, without a *Nurſery* both for Trees and Flowers, in which there are continually new Varieties of *Fruits, Timber,* or *Flowering Trees,* and choice *Flowers,* rais'd for a Supply of the ſeveral Parts of the *Garden, Orchard,* and *Wilderneſs.* The Size of this *Nurſery* muſt be proportion'd to the Extent of your Garden, or deſign'd Plantation; ſo that it is impoſſible to be exact in determining the Quantity of Ground neceſſary to be employ'd in this Way. But for a *Nurſery* of *Fruit, Foreſt,* or *Flowering Trees,* there ſhould not be leſs than two or three Acres for a large Garden; but for a ſmall Garden half an Acre will be ſufficient. And for a *Nurſery* for *Flower-Roots, Plants,* &c. one Acre for a large Garden, and a Quarter of an Acre for a ſmall one, will be enough. But this (as I ſaid before) cannot be well limited; ſince ſome Perſons, who are very curious in raiſing vaſt Quantities of new Flowers from Seed, will employ more than three times the Ground that is neceſſary only to raiſe a Supply of Flowers for their Borders, which are either annual, or biennial, and require to be brought up to ſupply the Place of ſuch as have flower'd and decay'd. But I ſhall firſt take Notice of the Method for raiſing a *Nurſery* of *Fruit* or *Foreſt Trees:* In doing of which, you ſhould obſerve,

1. That the Soil in which you make the *Nurſery,* be not better than that where the Trees are to be planted out for good: The not obſerving this, is the Reaſon that Trees are often at a Stand, or make but little Progreſs, for three or four Years, after they come from the *Nurſery;* as it commonly happens to ſuch Trees as are rais'd near *London,* and carry'd into the Northern Parts of *England,* where being planted in a poor Soil, and a much colder Situation, their Fruits ſeldom ripen well: Therefore it is by far the better Method (when you have obtain'd the Sorts you would propagate) to raiſe a *Nurſery* of the ſeveral Sorts of Stocks proper for the various Kinds of Fruit upon which you may bud or graft them; and thoſe Trees which are thus rais'd upon the Soil, and in the ſame Degree of Warmth where they are to be planted, will ſucceed much better than thoſe brought from a greater Diſtance, and from a richer Soil.

2. This Ground ought to be freſh, and not ſuch as has been already worn out by Trees, or other large-growing Plants; for in ſuch Soil your Stocks will not make any Progreſs.

3. It ought not to be too wet, nor over-dry, but rather of a middling Nature; tho', of the two Extremes, dry is to be preferr'd: Becauſe in ſuch Soils (tho' the Trees do not make ſo great a Progreſs as

in moiſt) yet they are generally ſlender, and more diſpos'd to Fruitfulneſs.

4. You muſt alſo obſerve to incloſe it, that Cattle and Vermin mayn't come in, for theſe will make ſad Havock with young Trees, eſpecially in Winter, when the Ground is cover'd with Snow, that they have little other Food which they can come at; ſome of the moſt miſchievous of theſe Animals are *Hares* and *Rabbits*, which are great Deſtroyers of young Trees at that Seaſon, by eating off all their Bark, therefore you muſt carefully guard your *Nurſery* againſt theſe Enemies.

The Ground being inclos'd, ſhould be carefully trench'd about eighteen Inches, or two Feet deep, provided it will allow it; this ſhould be done in *Auguſt*, that it may be ready to receive young Stocks at the Seaſon for Planting, which is commonly at the Beginning of *October*. In Trenching of the Ground, you muſt be very careful to cleanſe it from the Roots of all noxious Weeds, ſuch as *Couch-graſs*, *Docks*, &c. which, if left in the Ground, will get in amongſt the Roots of the Trees, ſo as not to be gotten out afterwards, and will ſpread and over-run the Ground, to the great Prejudice of your young Stocks.

After having dug the Ground, and the Seaſon being come for Planting, you muſt level down the Trenches as equal as poſſible; and then lay out the Ground into Quarters, proportionable to the Size thereof; and thoſe Quarters may be afterwards laid out in Beds, for the ſowing of Seeds, or the Stones of Fruit.

The beſt Sort of Stocks for *Peaches*, *Nectarines*, &c. are ſuch as are rais'd from the Stones of the *Muſcle*, and *White Pear-Plumb*: But you ſhould never plant Suckers of theſe, (which is what ſome People practiſe); for thoſe ſeldom make ſo good Stocks, nor are ever well-rooted Plants: Beſides, they are very ſubject to produce great Quantities of Suckers from their Roots, which are very troubleſome in the Borders or Walks of a Garden, and do greatly injure the Tree; ſo that you ſhould annually, or at leaſt every other Year, ſow a few Stones of each Sort, that you may never be at a Loſs for Stocks.

For *Pears*, you ſhould have ſuch Stocks as have been rais'd from the Kernels of the Fruit where *Perry* hath been made; or elſe preſerve the Seeds of ſome Sorts of Summer *Pears*, which do generally ſhoot ſtrong and vigorous, as the *Cuiſs Madam*, *Windſor*, &c. which you ſhould ſow for Stocks, early in the Spring, upon a Bed of good light freſh Earth, where they will come up in about ſix Weeks, and, if kept clear from Weeds, will be ſtrong enough to tranſplant out the *October* following. But for many Sorts of Summer and Autumn *Pears*, *Quince* Stocks are preferable to free (*i. e. Pear*) Stocks; theſe are very often propagated from Suckers, which are generally produced in Plenty from the Roots of old Trees; but thoſe are not near ſo good as ſuch as are propagated from Cuttings, which have always much better Roots, and are not ſo ſubject to produce Suckers as the other; which is a very deſirable Quality; ſince theſe Suckers do not only rob the Trees of Part of their Nouriſhment, but are very troubleſome in a Garden.

Apples are grafted or budded upon Stocks rais'd from Seeds which come from the *Cyder* Preſs, or upon *Crab* Stocks; the latter of which are eſteem'd for their Durableneſs, eſpecially for large Standard Trees; theſe ſhould be rais'd from Seeds, as the *Pear* Stocks, and muſt be treated in the ſame Manner; for thoſe procured from Suckers, *&c.* are not near ſo good: But for ſmall Gardens, the *Paradiſe* Stock hath been of late greatly eſteem'd; it being of very humble Growth, cauſing the Fruit Trees grafted or budded thereon to bear very ſoon, and they may be kept in ſmall Compaſs: But theſe are only proper for very ſmall Gardens, or by way of Curioſity; ſince the Trees thus rais'd are but of ſhort Duration, and ſeldom ariſe to any Size to produce Fruit in Quantities, unleſs the Graft or Bud be bury'd in Planting, ſo that they put forth Roots, and then they will be equal to Trees grafted upon free Stocks, ſince they receive but ſmall Advantage from the Stock.

For *Cherries*, you ſhould make uſe of Stocks rais'd from the Stones of the common *Black*, or the wild *Honey-Cherry*, both of which are ſtrong free Growers, and produce the cleaneſt Stocks.

For *Plums*, you may uſe the Stones of moſt free-growing Sorts; which will alſo do very well for *Apricocks*, theſe being not ſo difficult to take as *Peaches* or *Nectarines*; but (as I ſaid before) theſe ſhould not be rais'd from Suckers, for the Reaſon there aſſign'd, but rather from Stones.

There are ſome Perſons who recommend the *Almond* Stock for ſeveral Sorts of tender *Peaches*, upon which they will take much better than upon *Plum* Stocks: But theſe being tender in their Roots, and apt to ſhoot early in the Spring, are by many People rejected: And I think, if ſuch tender Sorts of *Peaches* which will not take upon *Plum* Stocks, were budded upon *Apricocks*, they would take very well; as would all Sorts of *Peaches* which are planted upon dry Soils continue much longer, and not be ſo ſubject to blight, if they were upon *Apricocks*; for it is obſerv'd, that upon ſuch Soils where *Peaches* ſeldom do well, *Apricocks* will thrive exceedingly; which may be owing to the Strength and Compactneſs of the Veſſels in the *Apricocks*, which render it more capable of aſſimilating or drawing its Nouriſhment from the *Plum* Stock, which in dry Soils ſeldom afford it in great Plenty to the Bud; and the *Peach* Tree being of a looſe, ſpungy Nature, is not ſo capable to draw its Nouriſhment therefrom, which occaſions that Weakneſs which is commonly obſerved in thoſe Trees when planted on a dry Soil.

There are ſome People who of late have budded and grafted *Cherries* upon Stocks of the *Corniſh Cherry*, which, they ſay, will render the Trees more fruitful, and leſs luxuriant in Growth, ſo that they may be kept in leſs Compaſs; theſe Stocks having the ſame Effect upon *Cherries*, as the *Paradiſe* Stock hath on *Apples*.

Having provided yourſelf with young Stocks of all theſe different Sorts, which ſhould be rais'd in the Seminary the preceding Year, you ſhould proceed to tranſplanting of them in *October* (as was before directed) into the *Nurſery*. The Diſtance which they ſhould be planted, if deſign'd for Standards, ſhould be three Feet and a half, or four Feet, Row from Row, and a Foot and a half diſtant in the Rows; but if for Dwarfs, three Feet, Row from Row, and one Foot in the Rows, will be a ſufficient Diſtance.

In taking theſe Stocks out of the Seed-beds, you muſt raiſe the Ground with a Spade, in order to preſerve their Roots as intire as poſſible; then with your Knife you ſhould prune oft all the very ſmall Fibres; and if there are any which have a Tendency to root down-right, ſuch Roots ſhould be ſhortened: Then having thus prepar'd the Plants, you ſhould draw a Line acroſs the Ground intended to be planted, and with your Spade open a Trench thereby exactly ſtrait, into which you ſhould place them at the Diſtance before deſign'd, ſetting them exactly upright; and then put the Earth in cloſe to them, filling up the Trench, and with your Foot preſs the Earth gently to the Roots of them, obſerving not to diſplace them ſo as to make the Rows crooked, which will render them unſightly. Theſe Plants ſhould by no means be headed, or pruned at Top, which will weaken them, and cauſe them to produce lateral Branches, and thereby ſpoil them.

If the Winter ſhould prove very cold, it will be of great Service to your young Stocks, to lay ſome Mulch upon the Surface of the Ground near their Roots, which will prevent the Froſt from penetrating the Ground ſo as to hurt the tender Fibres which were produced after planting: But you ſhould be careful not to let it lie too thick near the Stems of the Plants, leſt the Moiſture of the Dung ſhould injure the tender Bark, which it often does where there is not due Care taken to prevent it.

In the Summer-ſeaſon, you muſt always obſerve to hoe and deſtroy the Weeds; which if permitted to remain in the *Nurſery*, will greatly weaken and retard the Growth of your Stocks: And the ſucceeding Years, you ſhould obſerve to dig up the Ground every Spring between the Rows, which will looſen it ſo, as that the Fibres may eaſily ſtrike out on each Side, and the Weeds will be thereby deſtroy'd: You ſhould alſo obſerve, where any of the Stocks have ſhot out lateral Branches, to prune them off, that they may be encourag'd to grow upright and ſmooth.

The ſecond Year after Planting, ſuch of the Stocks as are deſign'd for Dwarf-trees, will be fit to bud; but thoſe which are deſign'd for Standards, ſhould be ſuffer'd to grow five or ſix Feet high before they are budded or grafted. The Manner of Budding and Grafting being fully deſcrib'd under their reſpective Heads, I ſhall not repeat them in this Place; nor need I ſay any thing more of treating theſe Trees after budding, that being alſo treated of under the ſeveral Articles of Fruits; I ſhall only add, that thoſe Stocks, which were budded in the Summer, and have fail'd, may be grafted the following Spring; but *Peaches* and *Nectarines* ſeldom take well from Grafts; theſe ſhould therefore be always budded.

The *Nurſery* deſign'd for *Foreſt-trees* and *Flowering-ſhrubs*, ſhould be larger than that for *Fruit-trees*, eſpecially if you intend to make large Plantations of theſe Trees: But in planting of theſe, you ſhould always obſerve to place the large growing Kinds by themſelves, ſeparate from thoſe of lower Growth, otherwiſe the large Trees will overſhade and ſtarve the ſmaller: But as the Method of propagating all the different Sorts of theſe Trees, whether from Seeds, Cuttings or Layers, is ſet down under their ſeveral Articles, ſo it is needleſs to repeat it in this Place.

I ſhall therefore only add, that after you have drawn off the Trees from any Part of your *Nurſery*, you ſhould, for a Year or two, employ the Ground for Kitchen-Garden, or ſome other Summer-Crops, in order to refreſh it, before you plant it again with Trees; and you ſhould always obſerve to put different Sorts of Trees upon the Ground from thoſe which grew in the ſame Place before, otherwiſe they ſeldom thrive well.

The Ground you intend for the *Flower-Nurſery*, ſhould be well ſituated to the Sun, but defended from ſtrong Winds by Plantations of Trees or Buildings, and the Soil ſhould be light and dry, which muſt always be obſerv'd, eſpecially for bulbous-rooted Flowers, which are deſign'd to be planted therein. The Particulars of which are exhibited under the Articles of *Flowers*.

In this *Nurſery* ſhould be planted the Off-ſets of all your bulbous-rooted Flowers, where they are to remain until they become blowing Roots; when they ſhould be remov'd into the Pleaſure-Garden, and planted either in Beds or Borders, according to the Goodneſs of the Flowers, or the Management which they require.

You may alſo, in this Ground, raiſe the ſeveral Sorts of bulbous-rooted Flowers from Seed, by which Means new Varieties may be obtain'd: But moſt People are diſcouraged from ſetting about this Work, from the Length of Time before the Seedlings will come to flower; however, after a Perſon hath once begun, and conſtantly continu'd ſowing every Year, after the Parcel firſt ſown has flower'd, the regular Succeſſion of them coming annually to flower, will not render this Method ſo tedious as it at firſt appear'd.

The ſeedling *Auriculas*, *Polyanthus's*, *Ranunculus's*, *Anemonies*, *Carnations*, &c. ſhould be rais'd in this *Nurſery*, where they ſhould be preſerv'd until they have flower'd; when you ſhould mark all ſuch as are worthy of being tranſplanted into the Flower-Garden; which ſhould be done in their proper Seaſons: For it is not ſo well to have all theſe ſeedling Flowers expos'd to publick View in the Flower-Garden, becauſe it always happens, that there are great Numbers of ordinary Flowers produc'd amongſt them, which will make but an indifferent Appearance in the Pleaſure-Garden.

In this Place alſo ſhould be rais'd all the Sorts of Biennial or Perennial Flowers from Seeds, to ſupply the Borders of the Pleaſure-Garden as the old Roots decay; ſuch as *Stock-Gilly-Flowers*, *Canterbury Bells*, *Fox Gloves*, *French Honeyſuckles*, *Wall-flowers*, *Columbines*, *Hollyhocks*, *Campanula's*, and many other Sorts, which are all under their reſpective Articles treated of, with the Method of propagating each Kind: I ſhall therefore only add, That the Earth in this *Nurſery* ſhould be often chang'd, and freſh brought in; as alſo the ſeveral Sorts of Flowers which are there rais'd, ſhould be every Year ſhifted into different Places, and not the ſame Sorts raiſed two or three Years upon the ſame Spot of Ground, for the Reaſon before aſſign'd.

NUX AVELLANA; *vide* Corylus.

NUX JUGLANS; The Walnut.

The *Characters* are;

It hath Male Flowers (or Katkins) which are produc'd at remote Diſtances from the Fruit on the ſame Tree: The outer Cover of the Fruit is very thick and green, under which is a rough hard Shell, in which the Fruit is incloſ'd, ſurrounded with a thin Skin; the Kernel is deeply divided into four Lobes; and the Leaves of the Tree are pinnated, or winged.

The *Species* are;

1. Nux Juglans; *ſive Regia vulgaris. C. B. P.* The Common Walnut.

2. Nux Juglans; *fructu maximo. C. B. P.* The large French Walnut.

3. Nux Juglans; *fructu tenero, & fragili putamine. C. B. P.* The thin-ſhell'd Walnut.

4. Nux Juglans; *bifera. C. B. P.* The Double Walnut.

5. Nux Juglans; *fructu ſerotino. C. B. P.* The late Ripe Walnut.

6. Nux Juglans; *fructu perduro. Tourn.* The Hard-ſhell'd Walnut.

7. Nux Juglans; *Virginiana nigra. H. L.* The Virginian Black Walnut.

8. Nux Juglans; *Virginiana, nigra, fructu oblongo, profundiſſime inſculpto. Rand.* Virginian Black Walnut, with a long furrow'd Fruit.

9. Nux Juglans; *Virginiana, foliis vulgari ſimilis, fructu ſubrotundo, cortice duriore lævi. Pluk. Alm.* The Hickery, *or* White Virginian Walnut.

10. Nux Juglans; *Virginiana, alba, minor, fructu nuces moſchatæ ſimilis, cortice glabro, ſummo faſtigio, veluti in aculeum producto. Pluk. Phyt.* The ſmall Hickery, or White Virginian Walnut.

The ſix Sorts firſt mention'd are propagated promiſcuouſly in *England*, and I believe are all ſeminal Variations, and not diſtinct Species, as in moſt other Sorts of Fruit-trees; for it rarely happens, that the Trees rais'd from Seeds produce the ſame Sort of Fruit again: So that thoſe who would be ſure of their Fruit, ſhould either make Choice of ſuch Trees in the Nurſery which have produc'd Fruit, and do prove to be the Sort they would have, or elſe inarch the Sorts intended upon any common Walnut-Stock; in which Method they will ſucceed, but theſe ſeldom make ſo good Trees, as thoſe which are rais'd from Seeds.

The ſecond and third Sorts are chiefly preferr'd for their Fruit, which are very large; and the Shells of the third Sort are ſo tender, as to be broken between the Fingers without any Difficulty, for which Reaſon it is eſteem'd the beſt worth propagating, for the Fruit, of any of the Sorts.

The *Virginian* Sorts are preſerv'd as Rarities by ſuch Perſons who are curious in collecting the ſeveral Sorts of Trees; but theſe are all worth cultivating for their Timber, which is preferable to that of our common Walnuts, and theſe Trees are equally as hardy, and ſome of them of much quicker Growth than the common Sort, eſpecially the ſeventh and eighth Sorts; the latter of which produces great Quantities of Fruit annually in the Phyſick Garden, but they are of no Uſe, except to propagate the Species; for their Shells are ſo hard as ſcarcely to be broken with a Mallet, and the Kernel is ſo ſmall that it is not worth the Trouble of coming at it.

All the Sorts of Walnuts which are propagated for Timber, ſhould be ſown in the Places where they are to remain, for the Roots of theſe Trees do always incline downward; which being ſtopp'd or broken, do prevent their aſpiring upward, ſo that they afterwards divaricate into Branches, and become low ſpreading Trees; but ſuch as are propagated for Fruit, are greatly mended by tranſplanting, for hereby they are render'd more fruitful, and their Fruit are generally larger and fairer: It being a common Obſervation, That downright Roots do greatly encourage the luxuriant Growth of Timber in all Sorts of Trees; but ſuch Trees as have their Roots ſpreading near the Surface of the Ground, are always the moſt fruitful.

The Nuts ſhould be preſerv'd in their outer Covers in dry Sand until *February*; when they ſhould be planted in Lines, at the Diſtance you intend them to remain; but in the Rows they may be plac'd pretty cloſe, for fear the Nuts ſhould miſcarry; and the young Trees, where they are too thick, may be remov'd after they have grown three or four Years, leaving the Remainder at the Diſtance where they are to ſtand.

In tranſplanting theſe Trees, you ſhould always obſerve never to prune either their Roots or Branches, both which are very injurious to them; nor ſhould you be too buſy in lopping or pruning the Branches of theſe Trees, for it often cauſes them to decay: But when there is a Neceſſity of cutting any of their Branches off, it ſhould be done early in *September*, that the Wound may heal over before the Cold increaſes, and the Branches ſhould always be cut off quite cloſe to the Trunk, otherwiſe the Stump which is left will decay, and rot the Body of the Tree.

The beſt Seaſon for tranſplanting theſe Trees, is ſo ſoon as the Leaves begin to decay; at which time, if they are carefully taken up, and their Branches preſerv'd intire, there will be little Danger of their ſucceeding; although they are eight or ten Years old, as I have ſeveral times experienc'd.

This Tree delights in a firm, rich, loamy Soil, or ſuch as is inclinable to Chalk or Marle, and will thrive very well in ſtony Ground, and on chalky Hills, as may be ſeen by thoſe large Plantations near *Leatherhead*, *Godſtone*, and *Carſhalton* in *Surrey*, where are great Numbers of theſe Trees planted upon the Downs, which annually produce great Quantities of Fruit, to the great Advantage of their Owners; one of which, I have been told, farms the Fruit of his Trees, to thoſe who ſupply the Markets, for thirty Pounds *per Annum*.

The Diſtance theſe Trees ſhould be plac'd, ought not to be leſs than forty Feet, eſpecially if regard be had to their Fruit; though when they are only deſign'd for Timber, if they ſtand near, it promotes their upright Growth. The Black *Virginian Walnut* is much more inclinable to grow upright than the common Sort, and the Wood being generally of a more beautiful Grain, renders it preferable to that, and better worth cultivating. I have ſeen ſome of this Wood which hath been beautifully vein'd with Black and White, which when poliſh'd, has appear'd at a Diſtance like vein'd Marble. This Wood is greatly eſteem'd by the Cabinet-Makers for Inlaying, as alſo for Bedſteads, Stools, Tables and Cabinets, and is one of the moſt durable Woods for thoſe Purpoſes yet known, it being rarely infected with Inſects of any kind (which may proceed from its extraordinary Bitterneſs:) But it is not proper for Buildings of Strength, it being of a very brittle Nature, and mighty ſubject to break very ſhort, though it commonly gives notice thereof by its Crackling ſome time before it breaks.

The general Opinion, That the beating of this Fruit improves the Trees, I do not believe, ſince in the doing of this, the younger Branches are generally broken and deſtroy'd: But as it would be exceeding troubleſome to gather it by Hand, ſo in beating it off, great Care ſhould be taken that it be not done with Violence, for the Reaſon before aſſign'd. In order to preſerve the Fruit, it ſhould remain upon the Trees till 'tis thorough ripe; when it ſhould be beaten down, and laid in Heaps for two or three Days; after which they ſhould be ſpread abroad, when, in a little Time, their Husks will eaſily part from the Shells: Then you muſt dry them well in the Sun, and lay them up in a dry Place, where Mice or other Vermin cannot come to them: In which Place they will remain good for four or five Months.

NUX VESICARIA; *vide* Staphylodendron.

NYMPHÆA; The Water-Lily.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves, which expand in form of a Roſe; *out of the Flower-cup ariſes the Pointal, which afterwards becomes an almoſt globular Fruit, conſiſting of many Cells, fill'd with Seeds, which are, for the moſt part, oblong.*

The *Species* are;

1. NYMPHÆA; *alba, major. C. B. P.* The great white Water-Lily.

2. NYMPHÆA; *lutea, major. C. B. P.* The great yellow Water-Lily.

3. NYMPHÆA; *lutea, minor, flore fimbriato. J. B.* The leſſer yellow Water-Lily, with a fring'd Flower.

There are ſome other *Species* of this Plant, all of which are Natives of deep ſtanding Waters, and therefore not to be cultivated in any other Places.

The beſt Method to propagate theſe Plants, is, to procure ſome of their Seed-Veſſels juſt as they are ripe and ready to open: Theſe ſhould be thrown into Canals, or large Ditches of Standing-Water, where the Seeds will ſink to the Bottom; and the following Spring the Plants will appear floating upon the Surface of the Water, and in *June* and *July* will produce their beautiful large Flowers: When they are once fix'd to the Place, they will multiply exceedingly, ſo as to cover the whole Surface of the Water in a few Years.

In ſome ſmall Gardens I have ſeen theſe Plants cultivated in large Troughs of Water, where they have flouriſh'd very well, and have annually produc'd great Quantities of Flowers: But as the Expence of theſe Troughs is pretty great (their Inſides requiring to be lin'd with Lead to preſerve them) ſo there are few People who care to be at that Charge.

O A O B

OAK; *vide* Quercus.

OBELISCOTHECA; Dwarf *American* Sun-flower; *vulg.*

The *Characters* are;

It hath radiated Flowers, having many Florets which are fertil, but the half Florets are barren: The Placenta is commonly conical, and filled with chaffy Empalements, which appear folded up, in each of which is an Ovary, which is ſhap'd like an Obeliſk reverſed, having a hollow Baſe. Theſe Parts are contain'd in one common Flower-cup, which is deeply cut into ſeveral Segments, and expands in Form of a Star; to which may be added, the Leaves are placed alternately.

The *Species* are;

1. OBELISCOTHECA; *integrifolia, radio aureo, umbone atrorubente. Hort. Elth.* Dwarf Sun-flower, with entire Leaves, the Rays of the Flower of a Gold Colour, and a dark red Diſk.

2. OBELISCOTHECA; *Doronici folio, radio purpureo, umbone atrorubente.* Dwarf Sun-flower, with Leaves like Leopard's-bane, the Rays of the Flower purple, and a dark red Diſk.

Theſe Plants are both Natives of *America*, the firſt of them was brought from *Virginia*, and the other from *Carolina*. They may both be propagated by parting of their Roots in the Spring, planting the Heads into Pots filled with freſh rich Earth, placing 'em in an open Situation, where they may have the Benefit of Sun and Showers, in which Place they may remain during the Summer-ſeaſon; but in Winter they muſt be ſhelter'd under a Frame, to protect them from ſevere Froſt, obſerving to let them have as much free Air as poſſible in mild Weather: They muſt be frequently refreſh'd with Water, eſpecially in Summer, when it ſhould be given them in Plenty; but in Winter they muſt have it more ſparingly. The firſt Sort increaſes pretty faſt in *England*, whereby it is become pretty common, and is preſerved for the Sake of its Flowers, which are produced in Plenty, and are of long Duration, each Flower continuing in Beauty five or ſix Weeks; and theſe being ſucceeded by new Flowers, the Plants are commonly furniſh'd with them four or five Months.

The ſecond Sort is leſs common than the firſt, by Reaſon of the few Off-ſets it produces from the Side, and the Seeds rarely being perfected in *Europe*, the Plants cannot be greatly increas'd; therefore, if a Perſon could procure the Seeds of this Plant from *Carolina*, it would be the ſureſt Method to obtain a Stock of the Plants. The Seeds of both theſe Plants ſhould be ſown on a moderate Hot-bed, and when the Plants are grown tolerably ſtrong, they ſhould be each planted into a ſeparate Pot, and inur'd to the open Air, by Degrees, after which they muſt be treated as hath been directed for the old Plants.

OCULUS CHRISTI; *vide* Horminum Sylveſtre.

OCYMUM; Baſil.

The *Characters* are;

It hath a labiated Flower, conſiſting of one Leaf, whoſe Creſt (or Upper-lip) is upright, roundiſh, notched, and larger than the Beard (or Lower-lip) which is generally curl'd or gently cut. Out of the Flower-cup riſes the Pointal, attended by four Embryo's, which afterwards become ſo many Seeds inclos'd in a Husk, which was before the Flower-cup; this Husk is divided into two Lips, the upper one growing upright, and is ſplit into two, but the under one is cut into ſeveral Parts.

The *Species* are;

1. OCYMUM; *vulgatius. C. B. P.* Common Baſil.

2. OCYMUM; *vulgatius, foliis ex nigro-vireſcentibus, flore albo. H. R. P.* Common Baſil with dark green Leaves and white Flowers.

3. OCYMUM; *minus, anguſtifolium, foliis ſerratis. C. B. P.* Leſſer Baſil with narrow ſerrated Leaves.

4. OCYMUM; *minus, anguſtifolium, foliis bullatis. H. R. P.* Leſſer narrow-leav'd Baſil with warted Leaves.

5. OCYMUM; *minimum. C. B. P.* The leaſt Baſil, *commonly call'd,* Buſh-Baſil.

6. OCYMUM; *minimum, foliis ex purpurâ nigricantibus. H. R. P.* The leaſt Baſil with dark purple Leaves.

7. OCYMUM; *Citri odore. C. B. P.* Baſil with a Citron Scent.

8. OCYMUM; *latifolium, maculatum, vel criſpum. C. B. P.* Broad-leav'd Baſil with curl'd ſpotted Leaves.

There are ſeveral other Varieties of this Plant mention'd by Botanick Writers, moſt of which are ſeminal Variations, which do not continue, but are annually varying from Seeds, ſo that it would be needleſs to mention them here; ſome of thoſe here inſerted are alſo Varieties, but as they are the moſt remarkable, I have given them a Place for the Sake of thoſe who love Varieties.

Theſe Plants being annual, are propagated from Seeds, which ſhould be ſown in *March*, upon a moderate Hot-bed; and when the Plants are come up, they ſhould be tranſplanted into another moderate Hot-bed, obſerving to water and ſhade them, until they have taken Root, after which they ſhould have Plenty of Air in mild Weather, otherwiſe they will draw up very weak; you muſt alſo water 'em frequently, for they love Moiſture. In *May* they ſhould be taken up with a Ball of Earth to their Roots, and tranſplanted either into Pots or Borders, obſerving to ſhade them until they have taking Root, after which they will require no farther Care, but to clear 'em from Weeds, and refreſh them with Water in dry Weather. Tho' theſe Plants are only propagated from Seeds, yet if you have any particular Sort which may ariſe from Seeds, which you are deſirous to increaſe, you may take off Cuttings, any time in *May*, and plant 'em on a moderate Hot-bed, obſerving to water and ſhade 'em for about ten Days, in which time they will take Root, and in three Weeks Time will be fit to remove either into Pots or Borders, with the ſeedling Plants. In *Auguſt* theſe Plants will perfect their Seeds, when thoſe Sorts which appear the moſt diſtinct, ſhould have their Seeds preſerved ſeparate, for ſaving the following Spring.

The firſt Sort is what the College of *Phyſicians* have preſcribed for Medicinal Uſe, but the fifth Sort is moſt eſteemed for its Beauty and Scent, by thoſe who cultivate them to adorn their Gardens.

OENANTHE; Water Dropwort.

The *Characters* are;

It is an umbelliferous Plant, whoſe Flower conſiſts of many Heart-ſhap'd Leaves, which expand in Form of a Roſe: *The Ovary is fix'd to the Top of the Empalement, which turns to a Fruit compos'd of two oblong Seeds, that are gibbous and ſtreak'd on one Side, and plain on the other, ending, as it were, in ſome*

Prickles, the middlemoſt of which is ſtronger than the reſt.

The *Species* are;

1. OEnanthe; *cicutæ facie Lobelii. Park. Theat.* Hemlock Dropwort.

2. OEnanthe; *aquatica. C.B.P.* Water Dropwort.

There are ſeveral other *Species* of this Plant, ſome of which are Natives of *England*; but as they are not at preſent uſeful, nor of any Beauty, I ſhall omit enumerating them in this Place.

The firſt of thoſe here mention'd is very common by the Side of the *Thames* on each Side *London*, as alſo by the Sides of large Ditches and Rivers in divers Parts of *England*: This Plant commonly grows four or five Feet high, with ſtrong-jointed Stalks, which being broke, do emit a yellowiſh fœtid Juice: The Leaves are ſomewhat like thoſe of the common *Hemlock*, but are of a lighter-green Colour: The Roots divide into four or five larger taper ones, which, when ſeparated, have ſome Reſemblance to *Parſnips*; for which ſome ignorant Perſons have taken and boil'd them, whereby Themſelves and Family have been poiſon'd.

The poiſonous Quality of this Plant hath led ſome Perſons to believe it is the *Cicuta* of the Antients: But, according to *Wepfer*, the *Sium alterum Oluſatri facie* of *Lobel* is what the Antients call'd *Cicuta*, as may be ſeen at large in *Wepfer*'s Book *de Cicuta*.

The ſecond Sort is very common in moiſt Soils, and by the Sides of Rivers in divers Parts of *England*: This is not ſuppos'd to be near ſo ſtrong as the firſt, but is of a poiſonous Quality.

All the Sorts of theſe Plants do naturally grow in moiſt Places; ſo that whoever hath a mind to cultivate them, ſhould ſow their Seeds ſoon after they are ripe in Autumn, upon a moiſt Soil, where they will come up, and thrive exceedingly the following Summer, and require no farther Care, but to clear them from Weeds.

OLEA; The *Olive*.

The *Characters* are;

The Leaves are, for the moſt part, oblong and ever-green; the Flower conſiſts of one Leaf; the lower Part of which is hollow'd, but the upper Part is divided into four Parts; the Ovary, which is fix'd in the Center of the Flower-cup, becomes an oval, ſoft pulpy Fruit, abounding with a fat Liquor, encloſing a hard rough Stone.

The *Species* are;

1. Olea; *ſativa. C. B. P.* The manur'd *Olive*.

2. Olea; *Africana, folio longo, lato ſuprà atroviridi ſplendente, infra pallide viridi. Boerh. Ind.* African *Olive*, with a broad long Leaf, of a ſhining dark-green Colour on the upper-ſide, but of a paler-green underneath.

3. Olba; *Africana, folio Buxi, craſſo, atroviridi, lucido, cortice albo, ſcabro. Boerh. Ind.* The African Box-leav'd *Olive*.

4. Olea; *minor, Lucenſis, fructu odorato. Tourn.* The Luca *Olive*.

5. Olea; *fructu majori, carne craſſa. Tourn.* *Olive*, with a larger Fruit, having a thicker Pulp.

6. Olea; *ſylveſtris, folio molli incano. C.B.P.* The Oleaſter, *or* Wild *Olive*, with ſoft hoary Leaves.

Theſe five firſt Sorts are preſerv'd in the Gardens of the Curious, where they are planted either in Pots or Caſes, and remov'd into the Green-houſe in the Winter, with *Oranges*, *Myrtles*, &c. but they are moſt of them hardy enough to endure the Cold of our ordinary Winters in the open Air, provided they are planted upon a dry Soil, and in a warm Situation; tho' in ſevere Winters they are often demoliſhed, or at leaſt loſe their Heads, or are kill'd to the Surface; but this is what they are liable to in the South Parts of *France*, in which Country theſe Trees abound; and yet in very ſharp Winters are moſt of them deſtroy'd. There was a Parcel of theſe Trees growing in the Gardens of *Cambden-Houſe* near *Kenſington* a few Years ſince, which were ſeven or eight Feet high, and in ſome good Seaſons did produce very good Fruit: Theſe were planted againſt a South-Wall, but were permitted to grow up rude without pruning, or faſtening to the Wall, (which they do by no means care for); and during the Time they were below the Top of the Wall, they throve very well; but after their Heads were gotten above the Wall, the North-Winds did uſually every Winter greatly prejudice them, and I believe the late hard Winter [1729] did entirely demoliſh them.

Theſe Plants may be propagated by laying down of their tender Branches, (in the manner practis'd for other Trees) which ſhould remain undiſturb'd two Years; in which time they will have taken Root, and may then be taken off from the old Plants, and tranſplanted either into Pots fill'd with freſh light Earth, or into the open Ground in a warm Situation. The beſt Seaſon for tranſplanting them is the Beginning of *April*; when you ſhould, if poſſible, take the Opportunity of a moiſt Seaſon, and thoſe which are planted in Pots, ſhould be plac'd in a ſhady Part of the Green-houſe until they have taken Root; but thoſe planted in the Ground ſhould have Mulch laid about their Roots, to prevent the Earth from drying too faſt, and now and then refreſh'd with Water, but you muſt by no means let them have too much Moiſture, which will rot the tender Fibres of their Roots, and deſtroy the Trees. When the Plants have taken freſh Root, thoſe in the Pots may be expos'd to the open Air, with other hardy Exoticks, with which they ſhould be hous'd in Winter, and treated as *Myrtles* and other leſs tender Trees and Shrubs; but thoſe in the open Air will require no farther Care until the Winter following, when you ſhould mulch the Ground about their Roots, to prevent the Froſt from penetrating deep into it: And if the Froſt ſhould prove very ſevere, you ſhould cover them with Mats, which will defend them from being injur'd thereby; but you muſt be cautious not to let the Mats continue over them after the Froſt is paſs'd, leſt by keeping them too cloſe, their Leaves and tender Branches ſhould prove mouldy for want of free Air, which will be of as bad Conſequence to the Trees as if they had been expos'd to the Froſt, and many times worſe, for it ſeldom happens, if they have taken much of this Mould, or have been long cover'd, ſo that it has enter'd the Bark, that they are ever recoverable again; whereas it often happens, that the Froſt only deſtroys the tender Shoots, but the Body and larger Branches remaining unhurt, do put out again the ſucceeding Spring.

Theſe Trees are generally brought over from *Italy* every Spring, by the Perſons who bring over the *Oranges*, *Jaſmines*, &c. from whom they may be procur'd pretty reaſonable;

ſonable, which is a better Method than to raiſe them from Layers in this Country, that being too tedious; and thoſe which are thus brought over, have many times very large Stems, to which Size young Plants in this Country would not arrive in ten or twelve Years Growth. When you firſt procure theſe Stems, you ſhould (after having ſoak'd their Roots twenty four Hours in Water, and clean'd them from the Filth they have contracted in their Paſſage) plant them in Pots fill'd with freſh, light, ſandy Earth, and plung'd into a moderate Hot-bed, obſerving to ſkreen them from the Violence of the Sun in the Heat of the Day, and alſo to refreſh them with Water, as you ſhall find the Earth in the Pots dry. In this Situation they will begin to ſhoot in a Month or ſix Weeks after; when you ſhould let them have Air in Proportion to the Warmth of the Seaſon: And after they have made pretty good Shoots, you ſhould inure them to the open Air by degrees; into which they ſhould be remov'd, placing them in a Situation where they may be defended from ſtrong Winds: In this Place they ſhould remain until *October* following; when they muſt be remov'd into the Green-houſe, as was before directed. Having thus manag'd theſe Plants until they have acquir'd ſtrong Roots, and made tolerable good Heads, you may draw them out of the Pots, preſerving the Earth to their Roots, and plant them in the open Air in a warm Situation, where you muſt manage them as was before directed for the young ones, and theſe will in two or three Years produce Fruit, provided they do well. The *Luca* and *Box-leav'd Olives* are the hardieſt, for which Reaſon they ſhould be preferr'd to plant in the open Air, but the firſt Sort will grow to be the largeſt Trees.

The *Oleaſter* is very hardy, and will endure the ſevereſt Cold of our Climate, provided it have a dry Soil, and is not too much expos'd to the cold Winds. This will grow to the Height of ſixteen or eighteen Feet, and make a large Head; and if planted among other Exotick Trees in Wilderneſs-Quarters, will greatly add to their Variety by its Silver-colour'd Leaves; and during the Seaſon of its Flowering, (which is in *June*) it perfumes the circumambient Air to a great Diſtance, tho' the Flowers are very ſmall, and of little Beauty. This ſometimes produces Fruit in *England*, when the Trees are pretty old, but it often happens, that if they bear any Quantity of Fruit, they die ſoon after.

This Tree may be propagated by laying down the tender Branches, which will take Root in one Year's Time; when they may be taken off from the old Plants, and plac'd where they are to remain, for they do not care to be often tranſplanted. The beſt Seaſon for removing them is the latter End of *March*, or the Beginning of *April*, juſt before the Leaves come out; when you ſhould alſo obſerve to mulch the Ground about their Roots, and refreſh them with Water, as they may require it; and after they have taken good Root in the Ground, they will grow very quick, and in two or three Years will produce Flowers.

OMPHALODES; Venus Navel-wort.

The *Characters* are;

The Flower conſiſts of one Leaf, which expands in a circular Order, and is cut into ſeveral Segments; the Pointal, which riſes in the Middle *of the Flower, becomes a Fruit, compos'd of four hollow, umbilicated Capſules, ſomewhat reſembling a Baſket; in each of which is contain'd one almoſt flat Seed adhering to the* Placenta, *which is pyramidal and four-corner'd.*

The *Species* are;

1. Omphalodes; *Luſitanica, lini folio. Tourn.* Venus Navel-wort, *vulgô.*

2. Omphalodes; *Luſitanica, elatior, Cynogloſſi folio. Tourn.* Taller Portugal Navel-wort, with a Hound's-tongue Leaf.

3. Omphalodes; *pumila, verna, Symphyti folio. Tourn.* Low Vernal Venus Navel-wort, with a Comfry-leaf, *or* Leſſer Borage.

The firſt of theſe Plants hath been a long Time in the *Engliſh* Gardens. The Seeds of this kind are ſold in the *London* Shops, as a Dwarf annual Flower, to be us'd for Edgings; for which Purpoſe it is by no means proper, for it often happens, that not a tenth Part of the Seeds do grow, though they were ſav'd with all poſſible Care, ſo that the Plants will be very thin, and in Patches; but however, it is a pretty Ornament to the Borders of the Pleaſure Garden, if ſown in Patches, as hath been directed for the *Dwarf Lychnis,* and other annual Plants of the ſame Growth, amongſt which this Plant makes a pretty Variety. The Seeds of it ſhould be ſown in Autumn, ſoon after they are ripe; at which Seaſon they will come up very well, (whereas thoſe ſown in the Spring do ſeldom ſucceed) and the Plants will abide the Cold of our ordinary Winters, and will flower early the ſucceeding Spring, from which Plants you will have good Seeds in *July*; but thoſe ſown in the Spring do very often fail of ripening Seeds.

The ſecond Sort is only in ſome curious Botanick Gardens at preſent, though it is equally as hardy as the firſt, and muſt be treated in the ſame Manner. This grows taller, and hath broader Leaves than the firſt, in which Reſpects the only Difference between them conſiſts.

The third Sort is an abiding Plant, and multiplies very faſt by its trailing Branches, which take Root at their Joints as they lie upon the Ground, and may be taken off, and tranſplanted to make new Plants. Theſe require a moiſt Soil and a ſhady Situation, where they will thrive exceedingly, and produce great Quantities of pretty blue Flowers early in the Spring, for which it is chiefly valued.

ONAGRA: Tree Primroſe; *vulgô.*

The *Characters* are;

It hath a Roſe-Flower conſiſting generally of four Leaves placed orbicularly and reſting on the Empalement, out of whoſe upper Part (which is fiſtulous) riſes the Pointal, the under Part turning to a Fruit which is Cylindrical, gaping in four Parts, and divided into four Cells filled with Seeds, which are generally corner'd) and adhere to the Placenta.

The *Species* are;

1. Onagra; *latifolia. Inſt. R. H.* Broad-leav'd Tree Primroſe.

2. Onagra; *latifolia, flore dilutiore. Inſt. R. H.* Broad-leav'd Tree Primroſe, with paler yellow Flowers.

3. Onagra; *latifolia, floribus amplis. Inſt. R. H.* Broad-leav'd Tree Primroſe, with ample Flowers.

4. Onagra; *anguſtifolia. Inſt. R. H.* Narrow-leav'd Tree Primroſe.

5. Onagra; *anguſtifolia, caule rubro, flore minori. Inſt. R. H.* Narrow-leav'd Tree Primroſe, with r Stalks and a ſmaller Flower.

6. Ona-

RA ; *Americana foliis*
mplioribus, parvo flore
. *American* Tree Prim-
ample Arſmart Leaves
yellow Flower.
IA ; *Bonarienſis villoſa,*
ili. Hort. Elth. Hairy
oſe from *Beunos Ayres,*
geable Flower.

Sort is very common
gliſh Gardens, where,
been ſuffer'd to ſcatter
will come up and flou-
t any Care, and many
nes a troubleſome Weed.
xt mention'd are equally
will grow in almoſt
Situation. The Seeds
lants may be ſown in
n open Situation, and
Plants come up, they
cept clean from Weeds,
they come up too cloſe,
m ſhould be pulled up,
om for the others to
his Place the Plants may
ichaelmas, when they
ranſplanted where they
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, if permitted to ſcatter,
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and ſeventh Sorts are
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Theſe are Plants of no
y, but are preſerv'd in
ns for Variety.

S; *vide* Cepa.

YCHIS; Cock's Head,
n.

haracters are;
a papilionaceous Flower, out of whoſe Empalement riſes the Pointal, which afterwards becomes a creſted Pod, which is ſometimes rough and full of Seeds, ſhap'd like a Kidney; to which may be added, the Flowers grow in a thick Spike.

The *Species* are;

1. ONOBRYCHIS; *foliis viciæ, fructu echinato major, floribus dilutè rubentibus. C. B. P.* Greater Cock's-head, with Vetch Leaves, rough Fruit, and pale-red Flowers.

2. ONOBRYCHIS; *foliis viciæ, fructu echinato major, floribus eleganter rubentibus. C. B. P.* Greater Cock's-head, with Vetch Leaves, rough Fruit, and beautiful red Flowers.

3. ONOBRYCHIS; *fructu echinato minor. C. B. P.* Smaller Cock's-head, with rough Fruit, *or* Medick Vetchling.

The two firſt are Varieties which only differ in the Colour of their Flowers, the ſame Seeds often producing both Sorts, tho' ſav'd from one Plant: As there is alſo another Variety with a white Flower, which doth come from the ſame Seed, ſo that they may paſs for one Plant.

This is an abiding Plant, which if ſown upon a dry, gravelly, or chalky Soil, will continue eighteen or twenty Years; but if it be ſown upon a deep, light, moiſt Soil, the Roots will run down into the Ground, and in the Winter Seaſon the Moiſture will rot the Roots, ſo that it ſeldom laſts above two Years in ſuch Places.

This is eſteem'd one of the beſt Sorts of Fodder, for moſt Cattle, and is a great Improvement to ſhallow, chalky Hills, upon which it ſucceeds better than in any other Soil, and will continue many Years; and the Roots of this Plant, when plough'd in, do greatly inrich the Ground.

The beſt Seaſon for ſowing of this Seed is in the Beginning or Middle of *March*, (according as the Seaſon is early or late) obſerving always to do it in dry Weather, otherwiſe the Seed will be apt to burſt with Moiſture, and ſo never come up. Theſe Seeds being large, there will require a great Quantity to ſow an Acre: The common Allowance is four Buſhels to an Acre, but I would not adviſe above three at moſt: And if this Seed were ſown in Rows, (in the Manner directed for the *Medica*) it would be a great Improvement to the Plants; for when they have Room enough they are very ſubject to branch out on every Side, and become very ſtrong; ſo that when they are in Rows, that the Ground between them can be ſtirr'd with a Hand-Plough, it will cauſe them to ſhoot much ſtronger than when they grow ſo cloſe that there can be no Culture beſtow'd on them.

I have taken up Roots of this kind, where they have grown ſingly, and kept clear from Weeds, whoſe Shoots have ſpread near two Feet wide, and were much ſtronger than thoſe which grew nearer together upon the ſame Soil.

There are ſome Perſons who recommend the ſowing *Oats* or *Barley* with this Seed, but that is a very bad Method, for what is gain'd from the Crop of *Corn* will be doubly loſt in the *Saint Foin*; and this generally holds true in moſt Sorts of Graſs-Seeds, for the Corn growing over it, doth ſo weaken the Crop beneath, that it ſcarcely recovers its Strength in a Year's Time after.

The Ground in which this Seed is ſown, ſhould be well ploughed and made very fine; and if you ſow it in Rows, the Drills ſhould be made eighteen Inches aſunder, and about two Inches deep, in which the Seed ſhould be ſown indifferently thick; for if the Plants come up too cloſe, it will be very eaſy to hoe them out, ſo as to leave the remaining ones ſix or eight Inches aſunder; for the Ground ſhould be hoed, after the Plants are come up, to deſtroy the Weeds, which if ſuffer'd to grow, would ſoon overbear the young ones, and deſtroy them; but when the Plants have obtain'd Strength, they will prevent the Weeds from growing up amongſt them.

The firſt Year after ſowing, you ſhould by no Means feed it down, for the Crown of the Roots being then young and tender, the Cattle would eat it ſo low as to entirely deſtroy the Roots; and if large Cattle were let in upon it, they would trample it down ſo much as to prevent its ſhooting again: Therefore the firſt Year it ſhould be mowed, which ſhould be done when it is in Flower, being careful to turn it often, that it may the ſooner dry and be remov'd; for while it continues upon the Ground, it greatly retards the Roots from ſhooting again.

The Time when this Crop will be fit to cut the firſt Year, is toward the latter End of *July* or the Beginning of *Auguſt*: After this is clear'd off, the Roots will ſoon ſhoot again, and by the End of *September* (provided the Seaſon be favourable) there will be a fine Crop fit for feeding: At which Time, or ſoon after, you may turn in Sheep, which will, in eating down the Graſs, inrich the Ground with their Dung, whereby the Roots will be greatly ſtrengthened; but you ſhould not ſuffer them to remain too long upon it, leſt, as I before obſerv'd, they ſhould eat it down too low, which would deſtroy the Roots; nor ſhould they ever be ſuffer'd to remain upon it longer than the Middle of *March*; after which Time it ſhould be let grow for a Crop, which will be fit to cut the latter End of *May*; and if you do not feed it, there will be a ſecond Crop by the End of *July* following, ſo that you may have two Crops every Year, beſides the Advantage of feeding it down in Winter and Spring; and if you obſerve to ſtir the Ground betwixt the Rows, after every Cutting, (as was directed for the *Medica*) it will be of great Service to the Roots, and occaſion the Shoots to be much ſtronger than if wholly neglected, as is the common Practice.

This Sort of Hay is excellently good for Horſes, and is eſteem'd one of the beſt Sorts of Food for moſt Cattle, eſpecially in the Spring, there being no Danger attending it, as there is in *Clover*, and ſome other Sorts of Fodder; it breeds abundance of Milk, and the Butter that is made of it is very good.

And altho' it is ſo common in many Parts of *England*, yet a few Plants of the deep-red flower'd Sort, when diſpos'd in large Borders of the Pleaſure-Garden, do afford an agreeable Variety: The Flowers, which are of a beautiful red Colour, being collected into a long Spike, and continuing a long Time in Beauty, do make a very pretty Mixture amongſt other Flowers in the Borders of large Gardens, where there is Room; and the Roots will abide ſeveral Years without renewing, requiring very little Culture, being extreme hardy, in reſpect to Heat or Cold, provided they are planted upon a dry Soil.

The third Sort is annual; nor are the Flowers ſo beautiful as thoſe of the former Sort, for which Reaſon it is ſeldom cultivated, except in Botanick Gardens, for Variety. This may be ſown in the Beginning of *March* upon a light freſh Soil, where the Plants will come up in *April*, and will require no farther Care but to clear 'em from Weeds: The Seeds will ripen in *Auguſt*, when they ſhould be gather'd, and preſerv'd for ſowing the ſucceeding Spring.

OPULUS: The Gelder Roſe.

The *Characters* are;

The Leaves are like thoſe of the Maple-Tree: *The Flowers conſiſt of one Leaf, which expands in a circular* Roſe *Form, and is divided at the Top into five Parts; theſe are collected (for the moſt part) in Form of an Umbel, the largeſt of which grow on the Outſide, and are barren; but thoſe in the Middle are fruitful producing red Berries, in each of which is contain'd one flat Heart-ſhap'd Seed.*

The *Species* are;

1. Opulus; *Ruelli.* Marſh Elder, *or* Gelder Roſe, with flat Flowers.

2. Opulus; *flore globoſo. Tourn.* The Gelder, *or* Gelderland Roſe.

3. Opulus; *flore globoſo, folio variegato.* The Gelder Roſe, with ſtrip'd Leaves.

The firſt of theſe Plants is very common in moiſt Woods in divers Parts of *England*, but is ſeldom cultivated in Gardens; though, if the Soil be moiſt in which this Tree be planted, it will afford a very agreeable Proſpect, both in the Seaſon when it is in Flower, and alſo in the Autumn when the Fruit is ripe, which generally grows in large Cluſters, and is of a beautiful red Colour: So that where a

Wilderneſs or other Plantation of Flowering Trees is deſign'd, and the Ground be moiſt, this and the next are two of the moſt proper Trees for ſuch Purpoſes; theſe thriving much better, and will produce their Flowers larger and in greater Quantities, than when they are placed in a dry Situation.

The ſecond Sort is very common in old Gardens in moſt Parts of *England:* This produces only barren Flowers, which being all very large, are produced in a globular Form, ſo that, at a Diſtance, they reſemble Snow-balls; whence the People in ſome Countries give it the Name of *Snow-ball Tree.* This Difference was at firſt accidental, as is the Caſe of all double Flowers which commonly ariſe from Seeds; and tho' theſe are not productive of Fruit, yet for the Sake of their Flowers they are much more eſteem'd than the ſingle Sort by the Gardeners.

The ſtrip'd Sort is alſo an Accident, occaſion'd by an Obſtruction of the Juices, as is the Caſe of all variegated Plants: This is preſerv'd as a Curioſity by ſuch as are Lovers of ſtrip'd Trees and Plants, but muſt not be planted in a rich Soil, which would cauſe them to grow vigorouſly, whereby they would be in Danger of becoming plain again.

All theſe Sorts may be propagated either from Suckers or by laying down their Branches, which will take Root in a Year's time; when they may be taken off from the old Plants, and tranſplanted either into a Nurſery, where they may be train'd up for two or three Years, or plac'd where they may remain for good. The beſt Time to remove theſe Trees, is at *Michaelmas,* as ſoon as their Leaves begin to decay, that they may be well rooted before the Drought of the next Spring comes on, which is often deſtructive to ſuch as have been newly tranſplanted, if they are not carefully attended with Water.

They are extreme hardy, and will endure the ſevereſt Cold of our moſt Northern Situations, and are only impatient of great Heat and Drought, ſo that they are very proper to plant in very cold Soils and Places which are greatly expos'd to the North Winds, where few other Shrubs will thrive ſo well. They will grow to the Height of twelve or fourteen Feet, and if reduc'd to regular Heads, are very ornamental during the Seaſon of Flowering; and their Flowers are very proper to intermix with *Peonies* and other large Flowers, for Baſons and Flower-pots to adorn Halls and Chimnies. Their Seaſon of Flowering is in *May,* though their Flowers do ſometimes continue in Beauty a great Part of *June,* eſpecially if the Weather prove cool and moiſt.

OPUNTIA: The Indian Fig.

The *Characters* are;

The Flower conſiſts of many Leaves, which expand in Form of a Roſe, *having a great Number of Stamina in the Center, which grow upon the Top of the Ovary: The Ovary afterwards becomes a fleſhy umbilicated Fruit, with a ſoft Pulp incloſing many Seeds, which are, for the m part, angular.*

The *Species* are;

1. OPUNTIA; *vulgô, Herbarior J. B.* The Common Indian F of the Botaniſts.

2. OPUNTIA; *minima, folio ſub rotundo. Tourn.* Leaſt Indian Fi with roundiſh Leaves.

3. OPUNTIA; *folio oblongo, media. Tourn.* Middle Indian Fig, with an oblong Leaf, *commonly call'd,* The Cochineal Fig-Tree.

4. OPUNTIA; *folio minori, rotundiori & compreſſiori. Tourn.* Indian Fig, with a ſmaller, rounder, and flatter Leaf.

5. OPUNTIA; *major, validiſſimis ſpinis munita. Tourn.* The greater Indian Fig, armed with very ſtrong Prickles.

6. OPUNTIA; *maxima, folio ſpinoſo, latiſſimo & longiſſimo. Tourn.* The largeſt Indian Fig, with a very broad and long prickly Leaf.

7. OPUNTIA; *folio ſpinoſo, longiſſimo & anguſto. Tourn.* Indian Fig, with a very long, narrow, prickly Leaf.

8. OPUNTIA; *latifolia, craſſiori folio, ſpinis albis numeroſis armato. Boerh. Ind.* Indian Fig, with a broad thick Leaf, arm'd with many white Spines.

9. OPUNTIA; *Curaſſavica, minima. H. Beaum.* The ſmalleſt Indian Fig from *Curacoa, commonly call'd,* The Pin Pillow.

10. OPUNTIA; *Americana, arbor excelſa, foliis reticulatis, flore flaveſcente. Plum.* American Indian Fig, which grows to be a tall Tree, with netted Leaves and a yellowiſh Flower.

11. OPUNTIA; *folio plano, glabro, Scolopendria. Boerh. Ind.* Indian Fig, with a plain ſmooth Leaf, like Spleenwort.

The firſt of theſe Plants hath been a long Time in *England,* and is the moſt common Sort in *Europe:* This, Mr. *Ray* and Dr. *Robinſon* obſerv'd growing wild in the Kingdom of *Naples,* by the Sides of the Highways, on the Sides of the Mountains, and among Rocks in great abundance; but in theſe Northern Parts of *Europe,* it is generally preſerv'd in Green-houſes with other Exotick Plants; tho' I have planted it under a warm Wall in a very dry Soil, where it has continu'd for five Years, and endured the ſevereſt of our Cold without any Cover, and has produc'd a greater Quantity of Flowers and Fruit than thoſe which were hous'd: So that the Cold is not ſo great an Enemy to this Plant as Wet, which if ſuffer'd to lie long upon it, or given in too large Quantities to the Root, will deſtroy it in a ſhort Time.

The other Sorts are much tenderer, being all of them Natives of the warm Parts of the *Weſt-Indies.* Theſe are ſome of them ſo tender as not to be preſerv'd without the Aſſiſtance of a Stove (eſpecially the ninth and eleventh Sorts) in any tolerable Degree of Health; for if they have not ſome additional Warmth to the Air of the Houſe in Winter, their Stems will ſhrivel and look yellowiſh and wither'd.

Theſe Plants may all be propagated by cutting off their Branches at the Joints, during any of the Summer Months; which ſhould be laid in a warm dry Place for a Fortnight, that the wounded Part may be heal'd over, otherwiſe they will rot with the Moiſture, which they imbibe at that Part, as is the Caſe with moſt other ſucculent Plants. The Soil in which theſe Plants are planted, ſhould be compos'd after the following Manner, *viz.* One third of light freſh Earth from a Paſture, a third Part Sea-ſand, and the other Part ſhould be one half rotten Tan, and the other half Lime-rubbiſh: Theſe ſhould be well mix'd, and laid in a Heap three or four Months before it be us'd, obſerving to turn it over at leaſt once a Month, that the ſeveral Parts may be well united; then you ſhould paſs it through a rough Screen, in order to ſeparate the largeſt Stones and Clods, but by no means ſift it too fine, which is a very common Fault: Then you ſhould reſerve ſome of the ſmaller Stones and Rubbiſh to lay at the Bottom of the Pots, in order to keep an open Paſſage for the Moiſture to drain off; which is what muſt be obſerv'd for all ſucculent Plants, for if the Moiſture be detain'd in the Pots, it will rot their Roots, and deſtroy the Plants.

When you plant any of the Branches of theſe Plants, you ſhould plunge the Pots into a moderate Hot-bed, which will greatly facilitate their taking Root: You ſhould alſo refreſh them now and then with a little Water, but be very careful not to let them have too much, or be too often water'd, eſpecially before they are rooted: When the Plants begin to ſhoot, you muſt give them a large Share of Air by raiſing the Glaſſes, otherwiſe their Shoots will draw up ſo weak as not to be able to ſupport themſelves; and after they have taken ſtrong Root, you ſhould inure them to the Air by degrees, and then remove them into the Stove where they ſhould remain, placing them near the Glaſſes, which ſhould always be open'd in warm Weather, ſo that they may have the Advantage of a free Air, and yet be protected from Wet and Cold.

During the Summer-ſeaſon, theſe Plants will require to be often refreſh'd with Water, but it muſt not be given to them in large Quantities, leſt it rot them; and in Winter they ſhould have very little Water given to them, but that ſhould be proportion'd to the Warmth of the Stove, for if the Air be kept very warm, they will require to be often refreſh'd, otherwiſe their Branches will ſhrink; but if the Houſe be kept in a moderate Degree of Warmth, they ſhould have very little, for Moiſture at that Seaſon will rot them very ſoon.

The Heat in which theſe Plants thrive beſt, is the temperate Point, as mark'd on Mr. *Fowler's Thermometers*; for if they are kept too warm in Winter, it cauſes their Shoots to be very tender, and thereby very liable to decay if not duly attended. Thoſe Sorts which are inclinable to grow upright, ſhould have their Branches ſupported with Stakes, otherwiſe their Weight is ſo great, that it will break them down.

Theſe Plants are by moſt People expos'd to the open Air in the Summer-ſeaſon, but they thrive much better if they are continu'd in the Stoves, provided the Glaſſes be kept open, ſo that they may have free Air; for when they are ſet abroad, the great Rains which generally fall in Summer, together with the unſettled Temper of the Air in our Climate, does greatly diminiſh their Beauty by retarding their Growth, and ſometimes in wet Summers they are ſo replete with Moiſture as to rot in the ſucceeding Winter; nor will thoſe Plants which are ſet abroad, (I mean the tender Sorts) produce their Flowers and Fruit in ſuch Plenty as thoſe which are conſtantly preſerv'd in the Houſe.

The third Sort is ſuppos'd to be the Plant upon which the *Cochineal-Fly* breeds: Theſe depoſite their Eggs in the Center of the Flowers, upon the Crown of the Ovary; and when they are hatch'd, the young Inſects feed upon the Fruit, which is of a deep-red Colour within, and if eaten by Men, colours their Urine as red as Blood; which has often frighted Strangers who have eaten of the Fruit, when they have thought it was real Blood which they voided, tho' there are no ill Effects attend it.

The ninth and eleventh Sorts are leſs common than the others, and are rarely ſeen but in very curious Gardens: Theſe are the tendereſt of them all, and ſhould be plac'd in a warm Part of the Stove in Winter, but muſt have very little Water given them at that Seaſon, and in Summer muſt always be kept in the Houſe, for they will not bear the open Air in the Heat of Summer, which is ſeldom very regular in this Country.

ORANGE; *vide* Aurantium.

ORCHARD: In planting of an *Orchard*, great Care ſhould be had to the Nature of the Soil, that ſuch Sorts of Fruit as are adapted to grow upon the Soil intended to be planted, may be choſen, otherwiſe there can be little Hopes of their ſucceeding; and it is for want of rightly obſerving this Method, that we ſee in many Countries *Orchards* planted which never arrive to any tolerable Degree of Perfection, their Trees ſtarving, and their Bodies are either cover'd with Moſs, or the Bark cracks and divides, both which are evident Signs of the Weakneſs of the Trees; whereas, if inſtead of *Apples*, the *Orchard* had been planted with *Pears*, *Cherries*, or any other ſort of Fruit to which the Soil had been adapted, the Trees might have grown very well, and produc'd great Quantities of Fruit.

As to the Poſition of an *Orchard* (if you are at full Liberty to chuſe) a riſing Ground, open to the *South Eaſt*, is to be preferr'd; but I would by no means adviſe to plant upon the Side of a Hill, where the Declivity is very great, for in ſuch Places the great Rains do commonly waſh down the better Part of the Soil, whereby the Trees would be depriv'd of proper Nouriſhment: But where the Riſe is gentle, it is of great Advantage to the Trees, by admitting the Sun and Air between them better than it can upon an intire Level, which is an exceeding Benefit to the Fruit, by diſſipating Fogs, and drying up the Damps, which when detain'd amongſt the Trees, do mix with the Air and render it rancid: If it be defended from the *Weſt*, *North*, and *Eaſt* Winds, it will alſo render the Situation ſtill more advantageous; for it is chiefly from thoſe Quarters that Fruit-Trees receive the greateſt Injury: Therefore, if the Place be not naturally defended from theſe by riſing Hills (which is always to be preferr'd;) then you ſhould plant large-growing Timber-Trees at ſome Diſtance from the *Orchard*, to anſwer this Purpoſe.

You ſhould alſo have a great Regard to the Diſtance of planting the Trees, which is what few People have rightly conſider'd; for if you plant them too cloſe, they will be liable to Blights, and the Air being hereby pent in amongſt them, will cauſe the Fruit to be ill-taſted, having a great Quantity of damp Vapours from the Perſpiration of the Trees, and the Exhalations from the Earth mix'd with it, which will be imbib'd by the Fruit, and render their Juices crude and unwholſome.

Wherefore I can't but recommend the Method which has been lately practis'd by ſome particular

Gentlemen with very good Succeſs; and that is, To plant the Rows of Trees fourſcore or a hundred Feet aſunder, and the Diſtance of the Trees in the Rows threeſcore Feet: The Ground between the Trees they plough and ſow with Wheat and other Crops, in the ſame manner as if it were clear from Trees, and they obſerve their Crops to be full as good as thoſe quite expos'd (except juſt under each Tree when they are grown large and afford a great Shade;) and by thus ploughing and tilling the Ground, the Trees are render'd more vigorous and healthy, ſcarcely ever having any Moſs or other Marks of Poverty, and will abide much longer, and produce better Fruit.

If the Ground in which you intend to plant an *Orchard* has been Paſture for ſome Years, then you ſhould plough in the *Green Sward* the Spring before you plant the Trees; and if you will permit it to lie a Summer fallow, it will greatly mend it, provided you ſtir it two or three times, to rot the Sward of Graſs, and prevent Weeds growing thereon.

At *Michaelmas* you ſhould plough it pretty deep, in order to make it looſe for the Roots of the Trees, which ſhould be planted thereon in *October*, provided the Soil be dry; but if it be moiſt, the Beginning of *March* will be a better Seaſon.

When you have finiſh'd planting the Trees, you ſhould provide ſome Stakes to ſupport them, otherwiſe the Wind will blow them out of the Ground; which will do them much Injury, eſpecially if they have been planted ſome Time; for the Ground at that Seaſon being warm, and for the moſt part moiſt, the Trees will very ſoon puſh out a great Number of young Fibres, which, if broken off by their being diſplac'd, will greatly retard the Growth of them.

In the Spring following, if the Seaſon ſhould prove dry, you ſhould cut a Quantity of green Turf, which muſt be laid upon the Surface of the Ground about their Roots, turning the Graſs downward, which will prevent the Sun and Wind from drying the Ground, whereby the Expence of Watering will be ſav'd; and after the firſt Year they will be out of Danger, provided they have taken well.

Whenever you plough the Ground betwixt theſe Trees, you muſt be careful not to go too deep amongſt their Roots, leſt you ſhould cut them off, which would greatly damage the Trees: but if you do it cautiouſly, the ſtirring of the Surface of the Ground will be of great Benefit to them: Tho' you ſhould obſerve, never to ſow too near the Trees, nor ſuffer any great-rooting Weeds to grow about them, which would exhauſt the Goodneſs of the Soil, and ſtarve 'em.

If, after the Turf which was laid round the Trees be rotted, you dig it gently about their Roots, it will greatly encourage them.

There are ſome Perſons who plant many Sorts of Fruit together in the ſame *Orchard*, mixing the Trees alternately: but this is a Method which ſhould always be avoided; for hereby there will be a very great Difference in the Growth of the Trees, which will not only render 'em unſightly, but alſo render the Fruit upon the lower Trees ill-taſted, by the tall ones over-ſhadowing them. So that if you are determin'd to plant ſeveral Sorts of Fruit on the ſame Spot, you ſhould obſerve to place the largeſt growing Trees backward, and ſo proceed to thoſe of leſs Growth, continuing the ſame Method quite through the whole Plantation; whereby it will appear at a Diſtance in a regular Slope, and the Sun and Air will more equally paſs throughout the whole *Orchard*, that every Tree may have an equal Benefit therefrom.

The Soil of your *Orchard* ſhould alſo be mended once in two or three Years with Dung, or other Manure, which will alſo be abſolutely neceſſary for the Crops ſown between: So that where Perſons are not inclinable to help their *Orchards*, where the Expence of Manure is pretty great; yet as there is a Crop expected from the Ground beſides the Fruit, they will the more readily be at the Charge upon that Account.

In making choice of Trees for an *Orchard*, you ſhould always obſerve to procure them from a Soil nearly akin to that where they are to be planted, or rather poorer, for if you have them from a very rich Soil, and that wherein you plant them is but indifferent, they will not thrive well, eſpecially for four or five Years after planting: So that 'tis a very wrong Practice to make the Nurſery, where young Trees are rais'd, very rich, when the Trees are deſign'd for a middling or poor Soil. The Trees ſhould alſo be young and thriving; for whatever ſome Perſons may adviſe to the contrary, yet it has always been obſerv'd, that tho' large Trees may grow and produce Fruit after being remov'd, they never make ſo good Trees, nor are ſo long-liv'd, as thoſe which are planted while young.

Theſe Trees, after they are planted out, will require no other pruning but only to cut out dead Branches, or ſuch as croſs each other ſo as to render their Heads confus'd and unſightly: The too often pruning them, or ſhortening their Branches, is very injurious, eſpecially to *Cherries* and Stone-Fruit, which will gum prodigiouſly, and decay in ſuch Places where they are cut: And the *Apples* and *Pears* which are not of ſo nice a Nature, will produce a greater Quantity of lateral Branches, which will fill the Heads of the Trees with weak Shoots whenever their Branches are thus ſhorten'd; and many times the Fruit is hereby cut off, which, on many Sorts of Fruit-Trees, is firſt produc'd at the Extremity of their Shoots.

It may perhaps ſeem ſtrange to ſome Perſons, that I ſhould recommend the allowing ſo much Diſtance to the Trees in an *Orchard*, becauſe a ſmall Piece of Ground will admit of very few Trees when planted in this Method: But they'll pleaſe to obſerve, that when the Trees are grown up, they will produce a great deal more Fruit, than twice the Number when planted cloſe, and will be vaſtly better taſted; the Trees, when placed at a large Diſtance, being never ſo much in Danger of Blighting as in cloſe Plantations, as hath been obſerv'd in *Herefordſhire*, the great County for *Orchards*, where they find that *Orchards* ſo planted, or ſo ſituated, as that the Air is pent up amongſt the Trees, the Vapours which ariſe from the Damp of the Ground, and the Perſpiration of the Trees, collect the Heat of the Sun, and reflect it in Streams ſo as to cauſe what they call a *Fire-blaſt*, which is the moſt hurtful to their Fruits; and this is moſt frequent where the *Orchards* are open to the South-Sun.

But as *Orchards* ſhould never be planted, unleſs where large Quantities of Fruit are deſired, ſo it will be the ſame thing to allow twice or three times the Quantity of Ground; ſince there may be a Crop of Grain of any Sort upon the ſame Place (as was before ſaid;) ſo that there is no Loſs of Ground: And for a Family only it is hardly worth while to plant an *Orchard*; ſince a Kitchen-Garden well planted with Eſpaliers will afford more Fruit than can be eaten while good, eſpecially if the Kitchen-Garden be proportion'd to the Largeneſs of the Family: And if *Cyder* be required, there may be a large Avenue of *Apple-Trees* extended croſs a neighbouring Field, which will render it pleaſant, and produce a great Quantity of Fruit; or there may be ſome ſingle Rows of Trees planted to ſurround Fields, *&c.* which will fully anſwer the ſame Purpoſe, and be leſs liable to the *Fire-blaſts* before-mention'd.

ORCHIS; Satyrion, or Fool-Stones.

The *Characters* are;

It hath an anomalous Flower, conſiſting of ſix diſſimilar Leaves, the five uppermoſt of which are ſo diſpos'd as to imitate in ſome manner a Helmet; the under one being of many Shapes, headed for the moſt part, and tail'd, ſometimes repreſenting a naked Man, ſometimes a Butter-fly, a Drone, a Pigeon, an Ape, a Lizard, a Parrot, a Fly, and other Things: but the Empalement afterwards becomes a Fruit divided into three Cells, in which are contain'd many ſmall Seeds. To theſe Notes ſhould be added, The Flowers are collected into a Spike; and the Roots are fleſhy, ſometimes roundiſh and double like Teſticles, ſometimes flat, and in a manner ſhap'd like a Hand.

The *Species* are;

1. Orchis; *morio mas, foliis maculatis. C. B. P.* The Male Fool-ſtones.

2. Orchis; *Morio fœmina. Park. Theat.* The Female Fool-ſtones.

3. Orchis; *barbata foetida. J. B.* The Lizard Flower, *or* Great Goat-ſtones.

4. Orchis; *Pannonica. 4 Cluſ. Hiſt.* Little Purple-flower'd *Orchis.*

5. Orchis; *obſcurè purpurea, odorata. Tourn.* Sweet-ſmelling dark-purple *Orchis.*

6. Orchis; *purpurea, ſpica congeſta pyramidali. Raii Syn.* Purple late-flowering *Orchis.*

7. Orchis; *odorata moſchata, ſive Monorchis. C. B. P.* The Yellow Sweet *or* Musk *Orchis.*

8. Orchis; *ſpiralis alba odorata. J. B.* Triple Ladies Traces.

9. Orchis; *latifolia, hiante cucullo, major. Tourn.* The Man *Orchis.*

10. Orchis; *anthropophora, Oreades. Col. Ec.* Man *Orchis*, with a ferrugineous, and ſometimes a green Colour.

11. Orchis; *myodes, galea & alis herbidis. J. B.* The common Fly *Orchis.*

12. Orchis; *myodes major. Park. Theat.* The Greater Fly *Orchis.*

13. Orchis; *fuſciflora, galea & alis purpuraſcentibus. J. B.* The Common Humble Bee *Satyrion*, *or* Bee-flower.

14. Orchis; *ſive Teſticulus Sphegodes, hirſuto flore. J. B.* Humble Bee *Satyrion*, with green Wings.

15. Orchis; *hermaphroditica, bifolia. J. B.* Butter-fly *Satyrion.*

16. Orchis; *alba bifolia minor, calcari oblongo. C. B. P.* The Leſſer Butter-fly *Satyrion.*

17. Orchis; *palmata, pratenſis, latifolia, longis calcaribus. C. B. P.* The Male-handed *Orchis, or* Male *Satyrion* Royal.

18. Orchis; *palmata, pratenſis, maculata. C. B. P.* The Female-handed *Orchis, or* Female *Satyrion* Royal.

19. Orchis; *palmata minor, calcaribus oblongis. C. B. P.* Red-handed *Orchis*, with long Spurs.

20. Orchis; *palmata minor, flore luteo-viridi. Raii Syn.* Handed *Orchis*, with a greeniſh Flower, *by ſome call'd,* The Frog *Orchis.*

All theſe Sorts of *Orchis* grow wild in ſeveral Parts of *England*; but, for the extreme Oddneſs and Beauty of their Flowers, deſerve a Place in every good Garden: And the Reaſon for their not being cultivated in Gardens, proceeds from their Difficulty to be tranſplanted: Tho' this, I believe, may be eaſily overcome, where a Perſon has an Opportunity of marking their Roots in their Time of Flowering, and letting them remain until their Leaves are decay'd, when they may be tranſplanted with Safety: For it is the ſame with moſt Sorts of bulbous or fleſhy-rooted Plants, which, if tranſplanted before their Leaves decay, ſeldom live, notwithſtanding you preſerve a large Ball of Earth about them; for the extreme Part of their Fibres extend to a great Depth in the Ground, from whence they receive their Nouriſhment; which if broken or damag'd by taking up their Roots, they ſeldom thrive after; for tho' they may ſometimes remain alive a Year or two, yet they grow weaker, until they quite decay: ſo that whoever would cultivate them, ſhould ſearch them out in their Seaſon of Flowering, and mark 'em; and when their Leaves are decay'd the Roots ſhould be taken up, and planted in a Soil and Situation as nearly reſembling that wherein they naturally grow, as poſſible, otherwiſe they will not thrive: So that they cannot be plac'd all in the ſame Bed; for ſome are only found upon chalky Hills, others in moiſt Meadows, and ſome in ſhady Woods, or under Trees: but if their Soil and Situation be adapted to their various Sorts, they will thrive and continue ſeveral Years, and, during their Seaſon of Flowering, will afford as great Varieties as any Flowers which are at preſent cultivated.

The firſt Sort flowers in *April*, and is very common in Paſtures and buſhy Places in moſt Parts of *England.*

The ſecond Sort flowers in *May*: This is common in Paſtures almoſt every-where.

The third Sort is more rare than the former: This is found in a Lane near *Dartford* in *Kent*, and is one of the largeſt of all the Kinds: It flowers at the Latter-end of *May.*

The fourth Sort grows upon dry barren Hills, particularly between *Northfleet* and *Graveſend*: This flowers at the Latter-end of *April.*

The fifth Sort is found in great Plenty in *Weſtmorland*, but particularly in the Meadows, upon both the Banks of *Eden*, throughout ſeveral Pariſhes: It flowers in *May.*

The ſixth Sort grows upon dry, barren, or chalky Hills in divers Parts of *England*: This flowers in *June.*

The ſeventh Sort grows upon chalky Hills, but is pretty rare; it is particularly found upon the Hills near *Cawſham* in *Berkſhire*, and upon *Gogmagog* Hills in *Cambridgeſhire*: It flowers in *May*.

The eighth Sort flowers in *Auguſt*: This grows upon dry ſtony Places, as alſo in moiſt Paſtures in the North Parts of *England*.

The ninth Sort grows upon *Cawſham* Hills, as alſo upon the dry Banks on the Road-ſide between *Greenhith* and *Northfleet* in *Kent*; and flowers in *May*.

The tenth Sort is found about *Northfleet* with the former, and flowers about the ſame time, as doth alſo the eleventh and twelfth.

The thirteenth Sort flowers in *June*: This grows upon dry Places in many Parts of *England*, as doth the fourteenth Sort, which flowers in *April*.

The fifteenth and ſixteenth Sorts grow in ſhady Places in divers Parts of *England*: They both flower in *May*.

The ſeventeenth and eighteenth Sorts grow in moiſt Paſtures very plentifully; the firſt flowering in *May*, the other in *June*.

The nineteenth Sort grows in moiſt Paſtures, and flowers in *June*.

The twentieth Sort grows in dry Paſtures, and flowers in *May*.

Thus having mention'd the ſeveral Places of Growth, and the Times of theſe Plants Flowering, it will be no very difficult Task for a Perſon to ſearch them out; which, if it happens to be in a Place where the Roots may be mark'd, and taken up after their Leaves are decay'd (as I ſaid before) there will be little Hazard of their ſucceeding: But if you are oblig'd to take 'em up in Flower, you muſt be very careful to preſerve as much Earth as poſſible to their Roots, otherwiſe there can be little Hopes of their living. Nor ſhould they be kept out of the Ground longer than till you can conveniently get them Home; for if the Air dries the Earth about 'em, they will ſhrink, and be good for nothing; and if the Earth be water'd, the Roots of ſuch as grow upon dry Soils will rot and periſh; therefore you ſhould be very careful in this Particular.

ORIGANUM; Origany, *or* Baſtard Marjoram.

The *Characters* are;

It hath a labiated Flower, conſiſting of one Leaf, whoſe Upper Lip is erect, roundiſh, and divided into two; but the Under Lip is cut into three Segments: Out of the Flower-cup riſes the Pointal, attended, as it were, by four Embryo's, which afterwards become ſo many roundiſh Seeds inclos'd in the Flower-cup: To which ſhould be added, The Flowers grow in ſcaly Spikes, ſomewhat reſembling thoſe of the Muſcary.

The *Species* are;

1. ORIGANUM; *vulgare, ſpontaneum. J. B.* Wild Marjoram.
2. ORIGANUM; *onites. C. B. P.* Pot Marjoram.
3. ORIGANUM; *Heracleoticum, cunila gallinacea Plinii. C. B. P.* Winter Sweet Marjoram; *vulgò.*
4. ORIGANUM, *ſylveſtre, humile. C. B. P.* Dwarf Wild *Origany*.
5. ORIGANUM; *ſylveſtre, foliis variegatis. Hort. Ed.* Wild Marjoram, with variegated Leaves.
6. ORIGANUM; *Orientale, folio brunellæ glauco, flore albo. Vaill.* Oriental Wild Marjoram, with a Self-heal, and white Flowers.

There are ſeveral other *Species* of this Plant preſerv'd in curious Botanick Gardens, for Variety: but as they are never propagated for Uſe, ſo I ſhall not enumerate them in this Place.

The firſt Sort here mention'd grows wild upon dry chalky Hills, and on gravelly Soils, in divers Parts of *England*, and is gather'd by the People who ſupply the Markets with Medicinal Herbs; ſo that it is rarely cultivated in Gardens.

The ſecond Sort was formerly more cultivated than at preſent: This was us'd as a Pot-herb for Soops, *&c.* but of late Years it has been almoſt neglected: It is ſaid to grow wild in ſome Parts of *England*.

The third Sort has the Appearance of common *Sweeet Marjoram*; and having a ſweet Smell, is cultivated in many Gardens near *London*, and brought to the Markets to ſupply the Want of *Sweet Marjoram* early in the Seaſon, before the *Marjoram* (which is an annual Plant) can be procur'd, and is us'd by the People who make up Noſegays.

The fourth and fifth Sorts are preſerv'd as Varieties by ſome People, who uſe the fourth, many times, as a Pot-herb, inſtead of the ſecond.

The ſixth Sort was brought from the *Levant*, but is hardy enough to endure the ſevereſt Cold of our Climate in the open Air, provided it be planted upon a dry Soil.

Theſe Plants may be all propagated by ſowing their Seeds in the Manner directed for *Marjoram*, and the Plants ſhould be treated in the ſame Way, therefore I ſhall forbear repeating it in this Place: They may alſo be propagated by parting their Roots, or planting Cuttings in the Spring, which, if water'd and ſhaded, will take Root in a few Days, and multiply exceedingly.

Their Roots will abide ſeveral Years, and require no farther Culture but to keep them clear from Weeds, and tranſplant them every Year, otherwiſe they will grow ſo large as to rot in the Middle for want of Air.

ORNITHOGALUM; Star of Bethlehem.

The *Characters* are;

It hath a Lily Flower, compos'd of ſix Petals (or Leaves) ranged circularly, whoſe Centre is poſſeſs'd by the Pointal, which afterwards turns to a roundiſh Fruit, which is divided into three Cells, and fill'd with roundiſh Seeds: To which muſt be added, it hath a bulbous or tuberoſe Root, in which it differs from Spider-wort.

The *Species* are;

1. ORNITHOGALUM; *anguſtifolium, majus, floribus ex albo vireſcentibus.* C. B. P. Spiked Star of Bethlehem, with a greeniſh Flower.
2. ORNITHOGALUM; *umbellatum medium, anguſtifolium.* C. B. P. Common Star of Bethlehem.
3. ORNITHOGALUM; *luteum.* C. B. P. Yellow Star of Bethlehem.
4. ORNITHOGALUM; *majus, ſpicatum, flore albo.* C. B. P. The Great White Star of Bethlehem.
5. ORNITHOGALUM; *ſpicatum, flore viridilacteſcente.* C. B. P. Spiked Star of Bethlehem, with a whitiſh-green Flower.
6. ORNITHOGALUM; *luteum, ſive pallidum majus.* C. B. P. Great Yellow, *or* Pale Star of Bethlehem.
7. ORNITHOGALUM; *Neapolitanum.* J. B. Star of Naples; *vulgò.*

There are ſeveral other *Species* of this Plant mention'd by Botanick Writers; but thoſe here enumerated are what I have obſerv'd in the *Engliſh* Gardens.

Theſe Plants are propagated by Off-ſets, which their Roots do commonly produce in great Plenty. The beſt Time to tranſplant their Roots is in *July*, when their Leaves are decay'd; for if they be remov'd late in Autumn, their Fibres will be ſhot out, when they will be very apt to ſuffer, if diſturb'd. They ſhould have a light ſandy Soil; but it muſt not be over-dung'd, which would cauſe their Roots to decay. They may be intermix'd with other Bulbous-rooted Flowers in the Borders of the *Pleaſure-Garden*, where they will afford an agreeable Variety, and continue in Flower a long Time. Their Roots need not be tranſplanted oftener than every other Year; for if they be taken up every Year, they will not increaſe ſo faſt; but when they are ſuffer'd to remain too long unremov'd, they will have ſo many Off-ſets about them as to weaken their blowing Roots. Theſe may alſo be propagated from Seeds, which ſhould be ſown and managed as moſt other Bulbous-rooted Flowers, and will produce their Flowers in three or four Years after ſowing.

ORNITHOPODIUM; Bird's-Foot.

The *Characters* are;

It hath a papilionaceous Flower, out of whoſe Empalement riſes the Pointal, which afterwards becomes a hooked jointed Pod, for the moſt part waved, containing in each Joint one roundiſh Seed: To which muſt be added, That ſeveral Pods grow together in ſuch a manner as to reſemble the Foot of a Bird.

The *Species* are;

1. ORNITHOPODIUM; *radice tuberculis nodoſa. C. B. P.* Bird's-Foot, with a knobbed Root.

2. ORNITHOPODIUM; *majus. C. B. P.* The Greater Bird's-Foot.

3. ORNITHOPODIUM; *Scorpioides, ſiliquâ compreſſâ. Tourn.* Caterpiller Bird's-Foot, with a flat Pod.

4. ORNITHOPODIUM; *portulacæ folio. Tourn.* Bird's-Foot, with a Purſlane Leaf.

Theſe Plants are propagated by ſowing their Seeds in the Spring upon a Bed of light freſh Earth, where they are to remain; (for they ſeldom do well when they are tranſplanted); and when the Plants come up, they muſt be carefully clear'd from Weeds; and where they are too cloſe, ſome of the Plants ſhould be pull'd out, ſo as to leave the remaining ones about ten Inches aſunder. In *June* theſe Plants will flower, and the Seeds will ripen in *Auguſt*. There is no great Beauty in them; but for the Variety of their jointed Pods, they are preſerv'd by ſome curious Perſons in their Pleaſure-Gardens; where, if their Seeds be ſown in Patches in the Borders, each Sort diſtinctly by itſelf, and the Plants thinn'd, leaving only two at each Patch, they will require no farther Care; and will add to the Variety, eſpecially where the *Snail* and *Caterpillar* Plants are preſerv'd, which are very proper to intermix with them. They are all annual Plants, which periſh ſoon after their Seeds are ripe.

OROBUS; Bitter Vetch.

The *Characters* are;

It hath a papilionaceous Flower, conſiſting of the Standard, the Keel, and the Wings; out of whoſe Empalement riſes the Pointal wrapt up in the Membrane, which afterwards becomes a round Pod, full of Oval-ſhap'd Seeds: To which muſt be added, That two Leaves join'd together grow upon a Rib that ends in a Point.

The *Species* are;

1. OROBUS; *ſylvaticus, purpureus, vernus. C. B. P.* Vernal Purple-Wood Bitter-Vetch.

2. **Orobus**; *ſylvaticus noſtras. Raii Syn.* Engliſh Wood Bitter-Vetch.

3. **Orobus**; *ſylvaticus, foliis oblongis glabris. Tourn.* Wood, *or* Heath Peas.

4. **Orobus**; *ſylvaticus, foliis viciæ. C. B. P.* Wood *Orobus*, with Vetch-Leaves.

5. **Orobus**; *latifolius, repens, ſiliqua parva. Boerh. Ind.* Broad-leav'd Creeping *Orobus*, with a ſmall Pod, *commonly call'd*, Venetian Vetch.

The firſt of theſe Plants was brought from *Germany*, where it grows in the Foreſts in great Plenty, as alſo about *Geneva*, but it is hardy enough to endure the Cold of our Climate in the open Air, provided it be planted in a dry Soil. This may be propagated either from Seeds or by parting the Roots in the Spring. If you ſow the Seeds, you ſhould obſerve to put them pretty early into the Ground before the dry Weather comes on, otherwiſe the Seeds will not come up: As you ſhould alſo tranſplant the Roots juſt before they begin to ſhoot, or elſe their Flowers will be very weak. The Roots of this Plant will abide many Years, and ſpring up freſh every Year, and in *April* produces fine Spikes of purple Pea-bloom Flowers, which are ſucceeded by ſtrait black Pods two Inches long, containing ſeveral roundiſh bitter Seeds.

The ſecond and third Sorts grow wild in Woods and ſhady Places in divers Parts of *England*, where, during their Seaſon of Flowering, they make a handſome Appearance; and when tranſplanted under Hedges in a Garden, they will thrive extreamly well, and produce great Quantities of Flowers every Spring. Theſe were formerly recommended by Dr. *Liſter*, to be ſown for Fodder, as a great Improvement; but I believe them not very proper for that Purpoſe, ſince they ſeldom thrive well when expos'd to the Sun, nor will they ever riſe to any conſiderable Height, their Branches trailing upon the Ground, unleſs they are ſupported, ſo that in a wet Seaſon they would be apt to rot.

The fourth Sort riſes to be two or three Feet high, and hath ſtrong upright Stalks; upon which, in *May*, are produc'd great Quantities of purple Flowers, which are ſucceeded by long ſtrait Pods, containing oblong bitter Seeds. The Root of this Plant will abide many Years; the Stalks decaying in Winter, but do ſpring up again the ſucceeding Year: It delights in a dry freſh Soil, and deſerves a Place in large Borders under the Shade of Trees, where it will thrive well, and make a handſome Appearance.

The fifth Sort was formerly preſerv'd in the Green-houſe as a tender Plant, but will endure the Cold of our Climate very well, if planted in a dry Soil; and thoſe Roots which are planted in the full Ground, will produce much ſtronger Flowers than thoſe preſerv'd in Pots. This Plant flowers in *April*, but ſeldom produces good Seeds in this Country.

Theſe Plants may all be propagated either from Seeds, or by parting of their Roots, in the manner directed for the firſt Sort; and if rightly diſpos'd in the Borders of a Garden, do afford an agreeable Variety: And ſince they are hardy, requiring but little Culture, they deſerve a Place in every good Garden.

ORYZA; Rice.

The *Characters* are;

It hath its Grains diſpos'd into a Panicle, which are almoſt of an oval Figure, and are cover'd with a thick Husk, ſomewhat like Barley.

There is but one *Species* of this Plant; *viz.*

Oryza; *Matth.* Rice.

This Grain is greatly cultivated in moſt of the Eaſtern Countries, where it is the chief Support of the Inhabitants; and great Quantities of it are brought into *England* and other *European* Countries every Year, where it is in great Eſteem for Puddings, *&c.* it being too tender to be produc'd in theſe Northern Countries, without the Aſſiſtance of artificial Heat: But from ſome Seeds which were formerly ſent to *South-Carolina*, there have been great Quantities produc'd, and it is found to ſucceed equally as well there as in its native Country, which is a very great Improvement to our *American* Settlements.

This Plant grows upon moiſt Soils, where the Ground can be flow'd over with Water after it is come up; ſo that whoever would cultivate it in *England* for Curioſity, ſhould ſow the Seeds upon a Hot-bed: And when the Plants are come up, they ſhould be tranſplanted into Pots fill'd with rich light Earth, and plac'd in Pans of Water, which ſhould be plung'd into a Hot-bed, and as the Water waſtes, ſo it muſt, from Time to Time, be renew'd again: In *July* theſe Plants may be ſet abroad in a warm Situation, ſtill preſerving the Water in the Pans, otherwiſe they will not thrive; and towards the latter End of *Auguſt* they will produce their Grain, which will ripen tolerably well, provided the Autumn proves favourable.

OSIER; *vide* Salix.

OSMUNDA REGALIS; Oſmund Royal, *or* Flowering Fern.

We have two *Species* of this Plant in *England*, viz.

1. Osmunda; *vulgaris & paluſtris. Inſt. R. H.* Common Marſh Oſmund Royal.

2. Osmunda; *foliis lunatis. Inſt. H. R.* Oſmund Royal, with Moonwort Leaves.

The firſt Sort is ſometimes uſed in Medicine. This grows upon Bogs in divers Parts of *England*, from whence the Roots may be procured, and planted in a moiſt Soil and a ſhady Situation, where they will thrive tolerably well. The beſt time for tranſplanting them is early in the Spring, before they begin to ſhoot.

The ſecond Sort is found in *Yorkſhire*, and ſome other Northern Counties, but is ſeldom preſerved in Gardens.

OX-EYE; *vide* Buphthalmum.

OXYACANTHA; *vide* Berberis.

OXYS; Wood Sorrel.

The *Characters* are;

It hath a Bell-ſhap'd Flower, conſiſting of one Leaf, having its Brim wide expanded, and cut into ſeveral Diviſions; the Pointal which riſes from the Flower-cup becomes an oblong membranous Fruit, divided into five ſeminal Cells, opening outward from the Baſe to the Top, and encloſing Seeds which often ſtart from their Lodges, by reaſon of the elaſtick Force of the Membrane which involves them.

The *Species* are;

1. Oxys; *flore albo. Inſt. H. R.* Common Wood Sorrel, with a white Flower.

2. Oxys; *flore purpuraſcente. Inſt. R. H.* Wood Sorrel, with a purpliſh Flower.

3. Oxys; *lutea. J. B.* Wood Sorrel, with a yellow Flower.

4. Oxys; *lutea, Americana, erectior. Inſt. R. H.* Upright yellow American Wood Sorrel.

The firſt Sort grows wild in moiſt Woods and other ſhady Places in divers Parts of *England*, and flowers in *April* and *May*. This is the Sort which is directed by the College of Phyſicians to be uſed in Medicine, but the Markets are generally ſupplied with the fourth Sort, which is not near ſo good, having very little taſte: The People who cultivate Medicinal Plants have propagated this Sort in their Gardens, becauſe it grows tall and branches, ſo that they can readily gather and tie it up in Bunches for Sale, whereas the true Sort grows cloſe to the Ground, and each Leaf riſes with a Footſtalk from the Root, which renders it troubleſome to gather in Quantities; but thoſe who uſe it in Medicine ſhould always be careful to have the true Sort.

The ſecond Sort is a Variety of the firſt, differing only in the Colour of its Flower. This is found in the North of *England*, and is preſerved in ſome curious Gardens for Variety. Theſe two Sorts are abiding Plants, and multiply very faſt by their creeping Roots. They ſhould be planted in a moiſt ſhady Border, where they will thrive extremely well.

The third Sort is an abiding Plant, and increaſes greatly by its creeping Roots, as alſo from Seed, but this is ſomewhat tender, and requires Shelter in ſevere Froſts. This is preſerved for Variety, but is not ſo good as the firſt for Uſe.

The fourth Sort is an annual Plant, this was originally brought from North *America*, but where it is once ſuffer'd to ſeed, it will maintain itſelf in a Garden, and is very hardy, ſo that at preſent it is become more common in the *London* Markets than our own Sort.

P Æ

PADUS; *vide* Ceraſus.

PÆONIA; The Peony.

The *Characters* are;

It hath a Flower compoſ'd of ſeveral Leaves, which are plac'd orbicularly, and expand in Form of a Roſe; *out of whoſe Empalement riſes the Pointal, which afterwards becomes a Fruit, in which ſeveral little Horns bent downwards, are gather'd, as it were, into a little Head, cover'd with Down, opening lengthwiſe, containing many globular Seeds.*

The *Species* are;

1. Pæonia; *folio nigricante, ſplendido, quæ Mas. C. B. P.* The Male *Peony*.

2. Pæonia; *Mas, major, flore incarnato. Hort. Eyſt.* The greater Male *Peony*, with a Fleſh-colour'd Flower.

3. Pæonia; *communis vel Fœmina. C. B. P.* The Female *Peony*.

4. Pæonia; *Fœmina, flore pleno, rubro, majore. C. B. P.* Female *Peony*, with a large, double, red Flower.

5. Pæonia; *pleno flore, rubro, minor. J. B.* *Peony*, with a leſſer, double, red Flower.

6. Pæonia; *flore exalbido, pleno, major. C. B. P.* Greater *Peony*, with a double, whitiſh Flower.

7. Pæonia; *Luſitanica, flore ſimplici, odorato.* Portugal *Peony*, with a ſingle ſweet-ſcented Flower.

There are ſome other Varieties of theſe Plants, which are preſerv'd in ſome of the curious *Botanick* Gardens abroad; but thoſe here mention'd are all the Sorts I have obſerv'd in the *Engliſh* Gardens.

The firſt of theſe Sorts is chiefly propagated for the Roots, which are us'd in Medicine; for the Flowers being ſingle, do not afford near ſo much Pleaſure as thoſe with double Flowers, nor will they abide near ſo long in Beauty.

The ſecond Sort hath larger ſingle Flowers than the firſt, but they are of a paler Colour: This is preſerv'd by Perſons who are curious in collecting the various Kinds of Flowers, but is not ſo much eſteem'd as thoſe which follow.

All the Sorts with double Flowers are preſerv'd in curious Gardens for the Beauty of their Flowers; which, when intermix'd with other large growing Plants in the Borders of large Gardens, do add to the Variety, and the Flowers are very ornamental in Baſons or Flower-pots, when plac'd in Rooms.

They are all extremely hardy, and will grow in almoſt any Soil or Situation, which renders them more valuable, for they will thrive under the Shade of Trees; and in ſuch Places they will continue much longer in Beauty.

They are propagated by parting their Roots, which multiply very faſt. The beſt Seaſon for tranſplanting them, is towards the latter End of *Auguſt*, or the Beginning of *September*; for if they are remov'd after their Roots have ſhot out new Fibres, they ſeldom flower ſtrong the ſucceeding Summer.

In parting of theſe Roots, you ſhould always obſerve to preſerve a Bud upon the Crown of each Off-ſet, otherwiſe they will come to nothing; nor ſhould you divide the Roots too ſmall, (eſpecially if you have regard to their blowing the following Year); for when their Off-ſets are weak, they many times don't flower the ſucceeding Summer, or at leaſt produce but one Flower upon each Root: But where you would multiply them in Quantities, you may divide them as ſmall as you pleaſe, provided there be a Bud to each Off-ſet; but then they ſhould be planted in a Nurſery-bed, for a Seaſon or two, to get Strength, before they are plac'd in the Flower-Garden.

The ſingle Sorts may be propagated from Seeds (which they generally produce in large Quantities, where the Flowers are permitted to remain); which ſhould be ſown in the Middle of *Auguſt* upon a Bed of light freſh Earth, covering them over about half an Inch thick with the ſame light Earth: The Spring following the Plants will come up; when they ſhould be carefully clear'd from Weeds, and in very dry Weather refreſh'd with Water, which will greatly forward their Growth. In this Bed they ſhould remain two Years before they are tranſplanted, obſerving in Autumn, when the Leaves are decay'd, to ſpread ſome freſh rich Earth over the Beds about an Inch thick, and conſtantly to keep them clear from Weeds.

When you tranſplant them, (which ſhould be done in *September*) you muſt prepare ſome Beds of freſh light Earth, which ſhould be dug and well cleans'd from the Roots of all noxious Weeds; then plant the Roots therein ſix Inches aſunder, and about three Inches deep. In theſe Beds they may remain until they flower; after which they may be tranſplanted where you deſign they ſhould grow. It is very probable there may be ſome Varieties obtain'd from the Seeds of theſe Plants, as is common in moſt other Flowers; ſo that thoſe which produce beautiful Flowers may be plac'd in the Flower-Garden, but ſuch as continue ſingle or ill-colour'd, may be planted in Beds to propagate for medicinal Uſe.

The *Portugal Peony* may alſo be propagated either by Seeds or parting of the Roots in the ſame Manner as the other Sorts, but ſhould have a lighter Soil, and a warmer Situation. The Flowers of this kind are ſingle, but do ſmell very ſweet, which renders it worthy of a Place in every good Garden.

PALIURUS; Chriſt's Thorn.

The *Characters* are;

It hath long ſharp Spines; the Flower conſiſts of five Leaves, which expand in Form of a Roſe; *out of the Flower-cup (which is divided into ſeveral Segments) riſes the Pointal, which becomes a Fruit ſhap'd like a Bonnet, having a Shell almoſt globular, which is divided into three Cells, in each of which is contain'd one roundiſh Seed.*

We have but one *Species* of this Plant, *viz.*

PALIURUS; *Dod.* Chriſt's Thorn.

This is by many Perſons ſuppos'd to be the Plant from which the Crown of Thorns which was put upon the Head of our Saviour, was compos'd: The Truth of which is ſupported by many Travellers of Credit, who affirm, That this is one of the moſt common Shrubs in the Country of *Judea*; and from the Pliableneſs of its Branches, which may be eaſily wrought into any Figure, it may afford a Probability.

It may be propagated by laying down its tender Branches in the Spring of the Year; which if carefully ſupply'd with Water in dry Weather, will take Root in a Year's time, and may then be taken off from the old Plant, and tranſplanted where it is to remain.

The beſt Time for tranſplanting this Plant is in the Beginning of *April*, juſt before it begins to ſhoot, obſerving to lay ſome Mulch upon the Ground about their Roots to prevent 'em from drying, as alſo to refreſh them now and then with a little Water until they have taken freſh Root, after which they will require but very little Care. They are very hardy, and will grow to be ten or twelve Feet high, if planted in a dry Soil, and a warm Situation. There is little Beauty in this Plant, but it is kept in Garden as a Curioſity.

PALMA; The Palm-Tree.

The *Characters* are;

It hath a ſingle unbranch'd Stalk; the Leaves are diſpos'd in a circular Form on the Top, which when they wither, or fall off with Age, new ones always ariſe out of the Middle of the remaining ones; among which, certain Sheaths or plain Twigs break forth, opening from the Bottom to the Top, very full of Flowers and Cluſters of Embryo's.

The *Species* are;

1. PALMA; *major. C. B. P.* The greater *Palm* or *Date-tree.*

2. PALMA; *minor. C. B. P.* The Dwarf *Palm*, with prickly Footſtalks.

3. PALMA; *Braſilienſis, pruniſera, folio plicatili, ſeu flabelliformi, caudice ſquamato. Raii Hiſt.* The Palmetto-tree.

4. PALMA; *altiſſima, non ſpinoſa, fructu pruniformi, minore, racemoſo, ſparſo. Sloan. Cat.* The Cabbage-tree.

5. Palma; *foliorum pediculis ſpinoſis, fructu pruniformi, luteo, oleoſo. Sloan. Cat.* The oily *Palm-tree*.

6. Palma; *tota ſpinoſa, major, fructu pruniformi. Sloan. Cat.* The great Macaw-tree.

7. Palma; *humilis, Dactylifera, radice repentiſſimâ ſobolifera, folio flabelliformi, pedunculo vix ſpinoſo. Boerh. Ind.* The Dwarf *Palm*, with ſcarcely any Prickles upon the Foot-ſtalks.

8. Palma; *foliis longiſſimis, pendiculis, abſque ullo pedunculo ex caudice glabro enatis. Boerh. Ind.* The Dragon-tree.

9. Palma; *Japonica, ſpinoſis pediculis, polypodii folio. Par. Bat.* The *Palm-tree* from *Japan*, with prickly Foot-ſtalks, and a Leaf like *Polypody*.

There are ſeveral other Sorts of *Palms* which grow in the *Eaſt* and *Weſt-Indies*, but thoſe here mention'd are all I have obſerv'd now growing in the *Engliſh* Gardens.

Theſe Plants may be eaſily produc'd from the Seeds (provided they are freſh); which ſhould be ſown in Pots fill'd with light rich Earth, and plung'd into a Hot-bed of Tanners Bark; which ſhould be kept in a moderate Temper, and the Earth frequently refreſh'd with Water.

When the Plants are come up, they ſhould be each planted into a ſeparate ſmall Pot fill'd with the ſame light rich Earth, and plung'd into a Hot-bed again, obſerving to refreſh 'em with Water, as alſo to let them have Air in Proportion to the Warmth of the Seaſon, and the Bed in which they are plac'd: During the Summer-time, they ſhould remain in the ſame Hot-bed, but in *Auguſt* you ſhould let them have a great Share of Air to harden them againſt the Approach of Winter; for if they are too much forc'd, they will be ſo tender as not to be preſerv'd through the Winter without much Difficulty, eſpecially if you have not the Conveniency of a Bark-Stove to keep them in.

The Beginning of *October*, you muſt remove the Plants into the Stove, placing them where they may have a great Share of Heat (theſe being ſomewhat tenderer, while young, than after they have acquir'd ſome Strength); tho' indeed, they may be ſometimes preſerv'd alive in a cooler Situation, yet their Progreſs would be ſo much retarded, as not to recover their Vigour the ſucceeding Summer: Nor is it worth the Trouble of raiſing theſe Plants from Seeds, where a Perſon has not the Conveniency of a good Stove to forward their Growth; for where this is wanting, they will not grow to any tolerable Size in eight or ten Years.

Whenever theſe Plants are remov'd, (which ſhould be done once a Year) you muſt be very careful not to cut or injure their large Roots, which is very hurtful to them, but you ſhould clear off all the ſmall Fibres which are inclineable to Mouldineſs; for if theſe are left on, they will, in time, decay, and hinder the freſh Fibres from coming out, which will greatly retard the Growth of the Plants.

The Soil in which theſe Plants ſhould be plac'd, muſt be compos'd in the following Manner, *viz.* A third Part of light freſh Earth taken from a Paſture-ground; a third Part Sea-ſand, and the other Part rotten Dung or Tanners Bark: Theſe ſhould be carefully mix'd, and laid in a Heap three or four Months at leaſt, before it is us'd, but ſhould be often turn'd over to prevent the Growth of Weeds, and to ſweeten the Earth.

You ſhould alſo obſerve to allow them Pots proportionable to the Sizes of the Plants, but you muſt never let them be too large, which is of worſe Conſequence than if they are too ſmall. During the Summer-ſeaſon, they ſhould be frequently refreſh'd with Water, but you muſt be careful not to give it in too great Quantities; and in Winter they muſt be now and then refreſh'd, eſpecially if they are plac'd in a warm Stove, otherwiſe they will require very little Water at that Seaſon.

Theſe Plants are moſt of them very ſlow Growers, even in their Native Countries, notwithſtanding they do arrive to a great Magnitude; for it has been often obſerv'd by ſeveral of the old Inhabitants of thoſe Countries, that the Plants of ſome of theſe Kinds, have not advanc'd two Feet in Height in twenty Years; ſo that when they are brought into theſe Countries, it can't be expected they ſhould advance very faſt, eſpecially where there is not due Care taken to preſerve them warm in Winter: But however ſlow of Growth theſe Plants are in their Native Countries, yet they may be with us greatly forwarded by placing the Pots into a Hot-bed of Tanners Bark; which ſhould be renew'd as often as is neceſſary, and the Plants always preſerv'd therein both Winter and Summer, obſerving to ſhift them into larger Pots as they advance in Growth, as alſo to ſupply them with Water: In which Management I have had ſeveral of them come on very faſt; for I obſerve the Roots of theſe Plants are very apt to root into the Bark (if their Pots remain a conſiderable Time without ſhifting) where they meet with a gentle Warmth, and the Moiſture ariſing from the Fermentation of the Bark, doth preſerve their Fibres plump and vigorous.

The *Date Palm* is of very ſlow Growth with us, but is eaſily produc'd from Seeds, taken out of the Fruit, which are brought into *England* in great Plenty; but there are very few of theſe Plants of any conſiderable Size at preſent in the *Engliſh* Gardens.

The *Dwarf Palm*, with prickly Footſtalks, as alſo that with few Prickles, are of humble Growth in their Native Countries, ſeldom riſing above four or five Feet high, but do extend their Roots very far, and increaſe thereby in the ſame Manner as the common Fern doth, ſo that the waſte Ground which is not cultivated, is over-run with the Plants; the Leaves of which the Inhabitants cut, and ſend into theſe Countries to make Flag-Brooms. Theſe grow in *Spain, Portugal,* and *Italy*, and are much hardier than any of the other Sorts.

The *Palmetto-Tree* is brought from the *Weſt-Indies*, where it grows to be a very large Tree; the Leaves of which the Inhabitants thatch their Houſes withal, for which Purpoſe they are very uſeful in thoſe Countries: Theſe Leaves, before they are expanded, are cut, and brought into *England* to make Womens plaited Hats, which were, a few Years ſince, greatly in Faſhion; and the Berries of theſe Trees were formerly much in Uſe in *England* for Buttons. Theſe were ſome of the chief Commodities which the *Bermuda Iſlands* did afford for Manufactory, but, at preſent, they are both diſus'd in *England*.

The *Cabbage-Tree* is very common in the *Caribbee Iſlands*, where it grows to a prodigious Height; *Ligon*, in his *Hiſtory of Barbados*, ſays, There are ſome of theſe Trees above two hundred Feet high, and that it is commonly a hundred Years before they arrive at Maturity enough to produce Fruit: The Leaves of this Tree envelope each other, ſo that thoſe which are incloſ'd, being depriv'd of the Air, are blanch'd, which is the Part the Inhabitants cut for Plait for Hats, *&c.* and the *Gemma* or young Shoots are pickled, and ſent into *England* by the Name of *Cabbage:* But whenever this Part is cut out, the Trees are deſtroy'd, nor do they riſe again from the old Roots, ſo that there are very few Trees left remaining near Plantations, except for Ornament; for their Stems being exceeding ſtrait, and their Leaves being produc'd very regularly at Top, do afford a moſt beautiful Proſpect; for which Reaſon the Planters generally ſpare two or three of them near their Habitations.

The *Oily Palm* grows in great Plenty on the Coaſt of *Guiney*, as alſo on *Cape Verd* Iſland, where they grow as high as the Main-Maſt of a Ship: But theſe Trees have been tranſplanted to *Jamaica* and *Barbados*, in both which Places they thrive very well. The Inhabitants make an Oil from the Pulp of the Fruit, and draw a Wine from the Body of the Trees, which inebriates; and with the Rind of theſe Trees they make Mats to lie upon. This Sort will eaſily riſe from Seeds, and if kept warm, will grow much faſter than the *Date-Palm*.

The *Macaw-Tree* is very common in the *Caribbee Iſlands*, where the *Negroes* pierce the tender Fruit, from whence flows out a pleaſant Liquor, which they are very fond of; and the Body of the Tree affords a ſolid Timber, with which they make *Javelins*, *Arrows*, &c. and is ſuppos'd by ſome to be a ſort of *Ebony*. This Tree grows very ſlow, and requires to be kept very warm in Winter.

The *Dragon Tree* is very common in the *Madera's* and the *Canary Iſlands*, where they grow to be large Trees; from the Bodies of which it is ſuppos'd the Dragon's Blood doth flow. This Plant ariſes very eaſily from the Seeds, and when it has acquir'd ſome Strength, is pretty hardy.

The *Japan Palm-Tree* is, at preſent, very rare in *England*, being only in two or three curious Gardens: It will come up from Seeds, if they are freſh, but the Plants muſt be kept very warm, eſpecially while young, otherwiſe they will not live through our Winters.

All the Sorts of *Palms* are worthy of being preſerv'd by thoſe who are curious in maintaining *Exotick* Plants, for the ſingular Structure of their Parts and Beauty of their Leaves, which make an agreeable Variety amongſt other curious Plants.

PANSIES; *vide* Viola *Tricolor*.

PAPAVER; Poppy.

The *Characters* are;

The Flower, for the moſt Part, conſiſts of four Leaves, which are plac'd orbicularly, and expand in Form of a Roſe, *out of whoſe Flower-cup (which conſiſts of two Leaves) riſes the Pointal, which afterwards becomes a Fruit or Pod, which is oval or oblong, and adorn'd with a little Head; under which, in ſome Species, is open'd a Series of Holes quite round, into the Cavity of the*

which is defended lengthwiſe
arious Leaves or Plates, to
great Number of very ſmall
dhere.

he *Species* are;

apaver; *hortenſe, ſemine albo,*
Dioſcoridis, album Plinio. C.
Garden Poppy, with white

apaver; *hortenſe, ſemine ni-*
veſtre Dioſcoridis, nigrum Pli-
B. P. Garden Poppy, with
eeds.

apaver; *flore pleno, rubrum.*
yſt. Double Red Poppy.

apaver; *flore pleno, album.*
. Double White Poppy.

apaver; *flore pleno, purpureo.*
. Double Purple Poppy.

apaver; *pleno flore, nigrum.*
P. Black Double-flower'd
.

Papaver; *laciniatis floribus.*
. Poppy with jagged Flow-

apaver; *flore pleno laciniato,*
or ſtriato. Hort. Ed. Double
Poppy, with beautiful ſtrip'd
s.

apaver; *Orientale, hirſutiſſi-*
flore magno. T. Cor. Very
Oriental Poppy, with a large
.

Papaver; *erraticum, majus*
Dioſcoridi, Plinio, Theophraſto.
. Red Poppy, *or* Corn Roſe.

Papaver; *erraticum, majus,*
lorum variegatis. H. R. Par.
Wild Poppy, whoſe Flower-
are variegated.

Papaver; *erraticum, flore*
C. B. P. Double Wild Pop-
mmonly called, The Dwarf
.

Papaver; *erraticum, flore*
iniato. H. R. Par. Wild Pop-
ith a double Vermilion-co-
Flower.

14. Papaver; *erraticum, flore pleno igneo. H. R. Par.* Wild Poppy, with a double fiery Flower.

15. Papaver; *erraticum, flore pleno igneo, marginibus candidis. H. L.* Wild Poppy, with a double fiery Flower, edg'd with white.

16. Papaver; *erraticum, flore pleno Phœnicio, unguibus albis. H. R. Par.* Wild Poppy, with a double purple Flower and white Bottom.

17. Papaver; *erraticum, minus. C. B. P.* Leſſer Wild Poppy, *or* Dwarf Poppy.

18. Papaver; *luteum perenne, laciniato folio, Cambro-Britannicum. Raii Syn.* Welſh, *or* Yellow Wild Baſtard Poppy.

The firſt Sort is cultivated in Gardens for medicinal Uſe, and is by ſome ſuppos'd to be the Plant from whence the *Opium* is procured: Of this there are ſeveral Varieties, which chiefly differ in the Colour of their Flowers; but they are no more than ſeminal Variations, and therefore not worth enumerating in this Place.

The *Black Poppy* grows wild in divers Parts of *England*: The Seeds of this Kind are ſold to feed Birds, by the Name of *Maw Seed.* Of this Sort there is a vaſt Number of Varieties ſome of which produce exceeding large Double Flowers of various Colours, and beautifully ſtrip'd: but theſe are apt to vary from Seed; therefore you ſhould never ſave the Seeds of any but ſuch as are very double, and well-colour'd, from which you may always expect to have good Sorts produc'd.

The *Oriental Poppy* is an abiding Plant, which produces a large ſingle Flower in *May,* which makes a beautiful Appearance: This may be propagated from Seeds, or by parting their Roots; the beſt Time to tranſplant them is at the Beginning of *March:* This muſt have a light Soil, and a warm Situation.

The *Red Poppy*, or *Corn Roſe*, is never propagated in Gardens, but is very common upon chalky dry Soils in almoſt every Part of *England*, where the Plants come up amongſt the Corn, and are very troubleſome: The Flowers of this Kind are brought into the Markets for Medicinal Uſe. There are many Varieties of this Plant with double Flowers, which are cultivated in the Flower Garden, but eſpecially the Dwarf Sort, of which there are ſome with very double Flowers, which are beautifully edged with white; theſe are by many Perſons ſown for Edgings to the large Borders of the Pleaſure-Garden; tho' I think them no ways proper for this, ſince their Flowers are but of a ſhort Duration; and the Plants, when their Seeds are perfected, do immediately decay, ſo that they appear unſightly. Beſides, where they grow very cloſe, the Flowers are generally ſmall: but if they are ſown in Patches upon the Borders, and when the Plants come up, are thinned out, ſo as to leave but three or four in each Place, they will flower very well, and look very beautifully.

All the Sorts of *Poppies* ſhould be ſown in *Autumn*; (for when they are ſown in the Spring, the Plants have not Time enough to get Strength before the hot Weather cauſes them to run up to flower; ſo that their Flowers are never ſo large or double as thoſe ſown in the *Autumn*.) When the Plants come up, they ſhould be carefully clear'd from Weeds, which is all the Culture they require (except to pull them up where they are too thick;) for they thrive better when they are ſuffer'd to remain where they were ſown, than if they were tranſplanted: but you ſhould obſerve to let them have Room in Proportion to the Growth of the Plants. This Sort firſt mention'd grows very large, and tall, therefore ſhould be not cloſer than eight or ten Inches. But the *Black* Sort, may ſtand ſomewhat nearer; tho' this appears handſomer when the Plants ſtand ſingle; therefore it is the better way to ſcatter the Seeds of thoſe which have beautiful Flowers very thin over the Borders of the Flower-Garden: and when the Plants come up they may be pull'd out where they are not well ſituated, leaving here and there a Plant, as the other Flowers in the Borders will admit, where, at the Seaſon of their Flowering, they will make a pretty Variety amongſt the Flowers: but they are of ſhort Duration; and having an ill Scent, they are leſs eſteem'd of late Years, ſince the Plenty of other more valuable Flowers.

PAPAVER CORNICULATUM; *vide* Glaucium.

PAPAVER SPINOSUM; *vide* Argemone.

PAPAYA; Papaw Tree.

The *Characters* are;

It hath a ſimple Stalk: The Flowers are Male and Female in different Plants: The Male Flowers (which are barren) are tubulous, conſiſting of one Leaf, and expand in the Form of a Star: The Female Flowers conſiſt of ſeveral Leaves, which expand in Form of a Roſe, *out of whoſe Flower-cup riſes the Pointal, which afterwards becomes a fleſhy Fruit, ſhaped like a* Cucumber *or* Melon, *containing many ſmall, oblong, furrow'd Seeds.*

Species are ;
AYA ; *fructu Melopeponis*
m. The Female *Papaw*
ng a Fruit like the *Melo-*

IYA ; *fructu maximo, Pe-*
. *Plum.* The Female *Pa-*
bearing a Fruit like the

YA ; *mas. Boerh. Ind.* The
w Tree.
'lants are very common
ibbee Iſlands, where they
Seeds, and will produce
ght or ten Months after.
'uit is cut before it is
afterwards ſliced and
Water until the milky
ut, and then boil'd and
ips, or bak'd as *Apples* ;
ripe, it is eaten as *Me-*
Pepper and Sugar, by
tants of thoſe Countries.
owers of the Male Sort,
e Fruit of the Female,
v'd and ſent over as a
: to *Europe*, and are ſaid
' cooling and cordial.
ind theſe Plants are pre-
uriofities, by ſuch as de-
xoticks: They are eaſily
n the Seeds (which are
rought from the *Weſt-*
lenty every Year) which
ſown upon a Hot-bed
y or *March* ; and when
are come up, they ſhould
each in a ſeparate ſmall
with rich light Earth,
d into a moderate Hot-
nners Bark, obſerving to
ſhade them until they
. Root ; after which, you
'em have Air in Propor-
: Warmth of the Seaſon,
the Glaſſes with Bricks,
you muſt often refreſh
. Water.

When the Plants have grown ſo as to fill the Pots with their Roots, they muſt be ſhaken out of them, preſerving the Earth as intire as poſſible to their Roots, and placed in larger Pots, which ſhould be fill'd with the ſame light Earth, and plung'd again into the Hot-bed, obſerving to give them Air and Water as was before directed: And thus from Time to Time, as the Plants increaſe their Stature, you ſhould ſhift them into larger Pots, which will cauſe them to be very ſtrong ; and if you keep 'em in the Hot-bed all the Summer, and give them due Attendance, they will riſe to ſix or ſeven Feet high before Winter.

In *October* they ſhould be placed into a new Hot-bed in the Bark Stove with other tender Exotick Plants, where, during the Winter-ſeaſon, they muſt be carefully look'd after, to water and cleanſe them well from Vermin and Filth ; and the Stove ſhould be kept nearly to the *Anana's* Heat, as mark'd on Mr. *Fowler's Thermometers*, in which they will thrive and retain their beautiful large Leaves all the Winter: And the Male Sort will often continue to produce freſh Flowers all that Seaſon, provided you do not keep 'em too dry. The Second Year the Female Sort will flower, and, if duly attended, will perfect the Fruit the following Spring.

Theſe Plants make a very beautiful Appearance (when grown large) amongſt other curious Exoticks in the Stove, and deſerve a Place in every good Collection of rare Plants.

PARIETARIA ; Pellitory.

The *Characters* are ;

It hath an apetalous Flower, whoſe Flower-cup is divided into four Parts, which

which is ſometimes Bell-ſhap'd, and at other times ſhap'd like a Funnel, with four Stamina *(or Threads) ſurrounding the Pointal; which Pointal becomes for the moſt part, an oblong Seed ſurrounded by the Flower-cup: To which may be added, The Flowers are produced from the Wings of the Leaves.*

The *Species* are;

1. PARIETARIA; *officinarum, & Dioſcoridis. C. B. P.* Pellitory of the Wall.

2. PARIETARIA; *minor, Ocymi folio. C. B. P.* Leſſer Pellitory, with a Baſil Leaf.

The firſt of theſe Plants is ſuppos'd to be the true Sort which is recommended by *Dioſcorides* for medicinal Uſe: This is the moſt common in *Germany*, and ſome other Countries; but is very different from that which grows wild in *England*, which is more like the ſecond Sort, tho' I can't poſitively affirm it to be the very ſame.

Theſe Plants grow wild upon old Walls and Buildings in great Plenty; but may be cultivated by ſowing their Seeds in *Autumn* upon a dry gravelly, or ſtony Soil, where they will thrive much better than in a richer Soil, and are preferable for Uſe to thoſe which grow in a moiſt rich Ground; for tho' in ſuch Places they will often be very rank, yet they are not near ſo ſtrongly ſcented.

PARSLEY; *vide* Apium.

PARSNIP; *vide* Paſtinaca.

PARTERRE, is a level Diviſion of Ground, which, for the moſt part, faces the South and beſt Front of an Houſe, and is generally furniſh'd with *Greens, Flowers,* &c.

There are ſeveral Sorts of *Parterres,* as *Bowling-green,* or *Plain, Parterres* of *Embroidery,* &c.

Plain Parterres are more beautiful in *England* than in any other Countries, by reaſon of the Excellency of our Turf, and that Decency and unaffected Simplicity; that it affords to the Eye of the Spectator.

Others are cut into Shell and Scroll-work, with Sand-Alleys between them, which are the fineſt *Parterre* Works eſteemed in *England.*

As to the general Proportion of *Parterres* an Oblong or long Square is accounted the moſt proper Figure for a *Parterre*; becauſe by the Rules of *Perſpective,* or the natural Declenſion of the viſual Rays in *Opticks,* a long Square ſinks almoſt to a Square, and an exact Square appears much leſs than it really is; therefore a *Parterre* ſhould not be leſs than twice as long as it is broad; twice and a half is accounted a very good Proportion, and it is very rare that three times is exceeded.

As to the Breadth of a *Parterre,* it is to take its Dimenſions from the Breadth of the Front of the Houſe: If it be not above an hundred Feet, 'twill be too narrow; and if the Front be two hundred Feet, the *Parterre* muſt be of the ſame Breadth.

Some do not approve of making *Parterrees* very broad, becauſe it makes 'em appear too ſhort; when nothing is more pleaſing to the Eye, than a contracted, regular Conduct and View, as ſoon as a Perſon goes out of an Houſe or Building: And a forward, direct View is the beſt, whether it be either *Parterre* or *Lawn,* or any other open Space, either two, three, or four-fold to the Width: And for that Reaſon, thoſe Deſigns may

juſtly

liſapprov'd by which the
; of the View is marred
imediate Entrance into the
the Angle of Light being
id confuſed.
iaking of *Parterres* too
ſes a great Expence, and
me time occaſions a Di-
of Wood, which is con-
the moſt valuable Part of

ſhould be a Terraſs Walk
Side the *Parterre*, for an
proper for View; and
there ſhould never be
of a *Parterre* between
'alk and Terraſs Walk a-
e hundred Feet; nor can
: made leſs than an hun-
l forty; and then the
at twice and a half the
would be three hundred
'eet, which ſome account
ie Proportion.
the Adorning and Fur-
ieſe *Parterres*, whether it
or with Embroidery, that
nuch upon the Form of
l therefore muſt be left to
ient and Fancy of the De-

'E FLOWER; *vide* Pul-

)N FLOWER; *vide* Gra-

NACA; Parſnip.
Characters are;
Plant with roſe and um-
'lowers, conſiſting of many
Leaves placed orbicularly,
' on the Empalement, which
a Fruit, compos'd of two
ch are oval, large, thin,
and generally caſting off
·: To theſe Marks muſt be
at the Leaves are winged

The *Species* are;

1. PASTINACA; *ſativa, latifolia. C. B. P.* Garden Parſnip.

2. PASTINACA; *ſylveſtris, latifolia. C. B. P.* Wild Parſnip.

3. PASTINACA; *ſylveſtris, altiſſima. Tourn.* The talleſt Wild Parſnip, *or* Hercules's All-heal.

The firſt Sort grows wild in divers Parts of *England*, upon the Sides of dry Banks, and is by ſome affirm'd to be no ways different from the ſecond Sort, but by Cultivation: Which is a very great Miſtake; for I have ſown the Seeds of both Sorts in the ſame Bed for ſeveral Years, but could not find that either Sort alter'd in the leaſt, the firſt ſtill retaining the ſame Smoothneſs in the Leaf, and the ſame pale Colour, and Largeneſs of Root; as did the ſecond its uſual Roughneſs, dark-green Colour, and ſlender Roots: Nor do I believe either Sort will alter, if they were cultivated ever-ſo long.

The Root and Seed of the ſecond Sort is ſometimes uſed in Medicine; but it is ſeldom cultivated in Gardens, the Markets being ſupply'd from the Fields: yet the Druggiſts commonly ſell the Seeds of the Garden Kind for it, which they may purchaſe at an eaſy Price, when it is too old to grow.

The firſt Sort is cultivated in Kitchen-Gardens, the Roots of which are large, ſweet, and accounted very nouriſhing. They are propagated by Seeds, which ſhould be ſown in *February*, or *March*, in a rich mellow Soil, which muſt be well dug, that the Roots may run downward; their greateſt Excellency being the Length and Bigneſs of the Roots: Theſe may be ſown alone, or with *Carrots*, as is practis'd by the Kitchen-Gardeners near *London*, ſome of whom do alſo mix *Leeks*, *Onions*, and *Lettuce* with their *Parſnips*: But this I think very wrong; for it is not poſſible that ſo many different Sorts can thrive well together, except they are allowed a conſiderable Diſtance; and if ſo, it will be equally the ſame to ſow the different Sorts ſeparate. However, *Carrots* and *Parſnips* may be ſown together very well, eſpecially where the *Carrots* are deſign'd to be drawn off young; becauſe the *Parſnips* do generally ſpread moſt towards the latter-end of Summer, which is after the *Carrots* are gone; ſo that there may be a double Crop upon the ſame Ground.

When the Plants are come up, you ſhould hoe them out, leaving them about ten Inches or a Foot aſunder; obſerving at the ſame time to cut up all the Weeds, which, if permitted to grow, would ſoon over-bear the Plants, and choak 'em: This muſt be repeated three or four times in the Spring, according as you find the Weeds grow: but in the latter-part of Summer, when the Plants are ſo ſtrong as to cover the Ground, they will prevent the Growth of Weeds; ſo that after that Seaſon they will require no farther Care.

When the Leaves begin to decay, the Roots may be dug up for Uſe, before which time they are ſeldom well-taſted; nor are they good for much late in the Spring, after they are ſhot out again: ſo that thoſe who would preſerve theſe Roots for Spring Uſe, ſhould dig them up in the Beginning of *February*, and bury them in Sand, in a dry Place, where they will remain good until the middle of *April*, or later.

If you intend to ſave the Seeds of this Plant, you ſhould make choice of ſome of the longeſt, ſtraiteſt, and largeſt Roots, which ſhould be planted about two Feet aſunder, in ſome Places where they may be defended from the ſtrong South and Weſt Winds; for the Stems of theſe Plants do commonly grow to a great Height, and are very ſubject to be broken by ſtrong Winds, if expos'd thereto: They ſhould be conſtantly kept clear from Weeds; and if the Seaſon ſhould prove very dry, you muſt give them ſome Water twice a Week, which will cauſe 'em to produce a greater Quantity of Seeds; which will be much ſtronger than if they were wholly neglected. Toward the latter End of *Auguſt*, or the Beginning of *September*, the Seeds will be ripe, at which Time you ſhould carefully cut off the Heads, and ſpread them upon a coarſe Cloth for two or three Days to dry; after which, the Seeds ſhould be beaten off, and put up for Uſe: But you muſt never truſt to theſe Seeds after they are a Year old, for they will ſeldom grow beyond that Age.

The third Sort is preſerv'd in Botanick Gardens, amongſt ſome other Sorts of theſe Plants, for Variety, but is ſeldom propagated for Uſe: This is by many ſuppos'd to be the *Panaces Syriacum* of the Antients, from whence the *Opopanax* is taken, which is ſuppos'd to be the concrete Juice of this Plant: As is the *Aſa fœtida*, ſuppos'd to be the concrete Juice of one Species of this Plant.

All theſe Sorts may be cultivated by ſowing their Seeds early in the Spring, or in Autumn ſoon after they are ripe, and ſhould be ma-

nag'd

the Garden Kind, with this
e, *viz.* the Plants ſhould
nearer than two Feet and
Diſtance; but then they
be reduced to this until
eding Spring: Theſe Roots
nial, and may be removed
ety at any time after their
re decay'd: They ſeldom
Seeds until the third Year
are ſown.

A; The Scarlet Flowering
eſnut; *vulgô.*

Characters are;

eaves are like thoſe of the
eſnut: *The Flower is of an*
s Figure, and conſiſts of five
which are ſo diſpos'd as to
a Lip Flower; the two up-
re united, and form a Sort
t; the three undermoſt ap-
what like a Mouth gaping:
owers are diſpos'd into a
d are of a beautiful ſcarlet
The Ovary, which riſes in
e of the Flower-cup, after-
comes an oblong pyramidal
vided into three Cells, in
hich is lodged one globular

is but one *Species* of this
z.

; *Boerh. Ind.* The Scarlet
g Horſe-Cheſnut; *vulgô.*

Tree is a Native of *Ame-*
m whence the Seeds were
ght into *Europe:* It grows
Plenty in the Woods of
rolina, but is very hardy,
the ſevereſt Cold of our
in the open Air.

y be propagated by ſow-
Seeds in the Spring, upon
Border of light ſandy
nd when the Plants come up,
uld be carefully clear'd from
but they muſt not be tran-
until the Spring following,
ey ſhould be removed juſt

before they begin to ſhoot, and placed either in a Nurſery to be train'd up, or elſe into the Places where they are to remain; obſerving, if the Seaſon be dry, to water 'em until they have taken Root, as alſo to lay ſome Mulch upon the Surface of the Ground, to prevent the Sun and Wind from drying it too faſt: And as the Plants advance, ſo the lateral Branches ſhould be pruned off, in order to reduce 'em to regular Stems.

You muſt alſo obſerve to dig the Ground about their Roots every Spring, that it may be looſe, to admit the Fibres of the Roots, which, while young, are too tender to penetrate the Ground, if it be very hard.

With this Management the Plants will greatly advance, and in four or five Years will produce Flowers and Fruits, which in warm Seaſons are perfected enough to grow, ſo that the Plants may be multiply'd therefrom very faſt.

This Tree may alſo be propagated by budding or inarching it upon the common *Horſe-Cheſnut:* but the Trees thus rais'd will never arrive to near the Size of thoſe which are produced from Seeds; nor will they grow near ſo faſt.

Such of theſe Trees as are rais'd from Seeds, if planted in a good Soil, will grow to be twenty-five or thirty Feet high, and produce great Numbers of beautiful red Flowers, which commonly appear the Beginning of *June*; at which Seaſon it makes a beautiful Appearance amongſt other hardy Trees.

PEACH; *vide* Perſica.

PEAR; *vide* Pyrus.

PEASE; *vide* Piſum.

PEASE EVERLASTING; *vide* Lathyrus.

PELLITORY OF THE WALL, *vide* Parietaria.

PENNY ROYAL; *vide* Pulegium.

PENTAPHYLLOIDES; Baſtard Cinquefoil.

The *Characters* are;

It hath pennated Leaves, conſiſting of ſeveral Lobes placed along the middle Rib, and terminated by an odd Lobe, in which it differs from the Cinquefoil; *the Flower conſiſts of five Leaves, which expand in Form of a* Roſe, *and are ſucceeded by hemiſpherical Seed-Veſſels, which contain many ſmall Seeds.*

The *Species* are;

1. Pentaphylloides; *Argentina dicta. Raii Syn.* Wild Tanſey *or* Silver-Weed.

2. Pentaphylloides; *frutiſcoſum. Raii Syn.* Shrub Cinque-foil.

The firſt of theſe Plants is very common in moiſt Meadows, and by the Sides of Ditches in divers Parts of *England*, and is rarely cultivated in Gardens, for the Branches of theſe Plants trail upon the Ground, and take Root at their Joints, ſo that in a ſhort time, a few of theſe Plants would over-run a whole Garden. This Herb is uſed in Medicine; for which Purpoſe it is gather'd in the Fields, and brought to Market by ſuch Perſons who make it their Buſineſs to gather wild Plants.

The ſecond Sort grows to be four or five Feet high, and may be train'd to a regular Head. This is a very proper Shrub to intermix with others of the ſame Growth, in ſmall Wilderneſs Quarters, where it will make a pretty Diverſity, and continues flowering a long time.

This is propagated either by Suckers or Layers, which may be obtain'd in great Plenty, for it generally produces a great Number of Shoots from the Bottom, which when they come out near the Ground, may be earthed up or laid down therein; and if they are water'd in dry Weather, will take Root in a ſhort time, when they may be taken off, and tranſplanted where they are to remain. The beſt Time to tranſplant them is in *October* or *February*: They delight in a moiſt Soil, though they will grow in almoſt any Soil or Situation.

There are ſeveral other *Species* of this Plant, which are preſerv'd in ſeveral curious *Botanick* Gardens for Variety; but as they are Plants of little Beauty or Uſe, ſo I ſhall not enumerate them here.

PEONY; *vide* Pæony.

PEPO; Pumpion.

The *Characters* are;

The Flower conſiſts of one Leaf, which is Bell-ſhaped, expanded at the Top, and cut into ſeveral Segments: Of theſe Flowers ſome are Male, and ſome are Female, as in the Cucumbers *and* Melons. *The Female Flowers grow upon the Top of the* Embryo, *which afterward becomes an oblong or round fleſhy Fruit, having ſometimes a hard, rugged, or uneven Rind, with Knobs and Furrows, and is often divided into three Parts, incloſing flat Seeds, that are edged or rimmed about as it were with a Ring, and fix'd to a ſpungy* Placenta.

The *Species* are;

1. Pepo; *oblongus. C. B. P.* The greater oblong Pumpion.

2. Pepo; *vulgaris. Raii Hiſt.* The common Pumpion.

3. Pepo; *rotundus, Aurantii formi. C. B. P.* Orange-ſhap'd Pumpion.

4. Pepo; *fructu parvo, pyriformi. Tourn.* Pear-ſhap'd Pumpion.

5. Pepo; *fructu minimo, ſphærico. Tourn.* Pumpion, with a very ſmall ſphærical Fruit.

There are ſeveral other Varieties of theſe Fruits, which ſeem to be only ſeminal Variations, ſo that it would be needleſs to mention them all in this Place, ſince the Seeds taken from any one of the Sorts will not continue the ſame three Years together, if ſown in the ſame Garden, as I have ſeveral times experienc'd.

The two firſt Sorts are by ſome Perſons cultivated for their Fruit; which when ripe, they cut open, and take out the Seeds, and then ſlice ſome Apples into the Shell, mixing them with the Pulp of the Fruit and Sugar: This they bake in an Oven, and afterwards eat it ſpread upon Bread; but it is too ſtrong for Perſons of weak Stomachs, and only proper for Country People who uſe much Exerciſe.

The Seeds of theſe Plants are us'd as one of the four cold Seeds in Medicine.

The other Sorts are preſerv'd by ſome curious Perſons for Variety, but are of little Uſe, being good for nothing when grown old; but while they are very ſmall, ſome Perſons gather and boil them, like *Turnips*, or as they do the *Squaſhes*, and are very fond of them.

Theſe may be propagated in the ſame manner as was directed for the *Gourds*, to which I ſhall refer the Reader, to avoid Repetition.

PERICLYMENUM; Trumpet Honeyſuckle; *vulgò.*

The *Characters* are;

It hath the whole Appearance of the Honeyſuckle *(from which it differs in the Shape of the Flower) which is tubuloſe or Bell-ſhap'd, and expands at the Top, where it is cut into ſeveral almoſt equal Segments.*

We have but one *Species* of this Plant at preſent, *viz.*

Periclymenum, *Virginianum, ſempervirens & florens. H. L.* Virginian Scarlet Honeyſuckle; *vulgò.*

This Shrub is greatly eſteem'd for the Beauty of its Flowers, which are of a fine Scarlet-colour; the Leaves continue all the Year green, and it continues flowering moſt Part of the Summer.

It may be propagated by laying down the tender Branches in the Spring, obſerving in dry Weather to refreſh them with Water, which will greatly facilitate their Rooting: The Spring following they will be fit to tranſplant; when they ſhould be cut off from the old Plants, and carefully taken up, ſo as not to injure their Roots. The beſt Time to remove them is in *March*, juſt before they ſhoot out; but you muſt obſerve, if the Seaſon ſhould prove dry, to water them, and lay a little Mulch upon the Surface of the Ground near their Stems, to prevent the Ground from drying too faſt. It ſhould have a ſtrong Soil, and be expos'd to the South-Eaſt Sun, but muſt have the Aſſiſtance of a Wall or Pale to ſupport the Branches, otherwiſe they will trail upon the Ground.

This Plant, although a Native of *Virginia*, yet if planted in a clear Air, will endure the ſevereſt Cold of our Climate very well, but it will not thrive in cloſe Places, or too near the City, the Smoak ariſing from the Sea-coal Fires being very pernicious to it.

PERIPLOCA; Virginian Silk; *vulgò.*

The *Characters* are;

The Flower conſiſts of one Leaf, which is more expanded at the Brim than thoſe of the Apocynum; *the Pointal which riſes in the Center of the Flower-cup, becomes a Fruit ſo nearly reſembling that of the* Apocynum, *as not to be diſtinguiſh'd therefrom but by very curious Obſervers; to which ſhould be added, it hath climbing Stalks.*

The *Species* are;

RADCLIFFE

1. Periploca; *foliis oblongis. Tourn. Periploca,* with oblong Leaves.
2. Periploca; *Monſpeliaca, foliis rotundioribus. Tourn. Periploca* of Montpelier, with rounder Leaves.

There are ſeveral other *Species* of this Plant which are Natives of *America*; but the two here mentioned are all I have obſerv'd in the *Engliſh* Gardens, which will abide in the open Air: The firſt is very common in *England*, but the latter is, at preſent, pretty rare.

Theſe may be propagated by laying down their Branches in the Spring, which will take Root in a Year's time; when they may be taken off, and tranſplanted where they are to remain: Which ſhould be either againſt a lofty Wall or Building, or elſe plac'd in Wilderneſs Quarters amongſt other tall Flowering-trees, where they ſhould be ſupported by ſtrong Poles, about which theſe Plants will twine and riſe to a great Height. Theſe two Sorts are hardy, and will endure the Cold of our Winters very well, provided they are planted in a dry Soil.

They produce their Flowers in *June* and *July*, but do rarely perfect their Seeds in *England*. Their Flowers are not very beautiful, but, for their Oddneſs, may have a Place amongſt other hardy Shrubs in every good Garden.

PERIWINCLE; *vide* Pervinca.

PERSICA; The Peach-Tree.

The *Characters* are;

It hath long narrow Leaves; the Flower conſiſts of ſeveral Leaves, which are plac'd in a circular Order, and expand in Form of a Roſe; *the Pointal, which riſes from the Center of the Flower-cup, becomes a roundiſh, fleſhy Fruit, having a longitudinal Furrow, incloſing a rough, rugged Stone, which is deeply furrow'd, by which it is diſtinguiſh'd from the* Almond.

There is a great Variety of theſe Trees, which are cultivated in the Gardens of thoſe who are curious in collecting the ſeveral Sorts of Fruit in the different Parts of *Europe*: I ſhall therefore firſt beg Leave to mention two or three Sorts which are cultivated for the Beauty of their Flowers; after which, I ſhall enumerate the ſeveral Sorts of good Fruit which have come to my Knowledge:

1. Persica; *vulgaris, flore pleno. Tourn.* Peach-Tree, with double Flowers.
2. Persica; *Africana, nana, flore incarnato, ſimplici. Tourn.* Dwarf-Almond, with ſingle Flowers; *vulgò.*
3. Persica; *Africana, nana, flore incarnato, pleno. Tourn.* Double-flowering Dwarf-Almond; *vulgò.*

The firſt of theſe Trees is a very great Ornament in a Garden early in the Spring, the Flowers being very large, double, and of a beautiful Red or Purple-colour. This may be planted in Standards, and if intermix'd amongſt other Flowering-trees of the ſame Growth, makes a very agreeable Variety: Or it may be planted againſt the

Walls of the Pleaſure-Garden, where the beautiful Appearance of its Flowers early in the Spring will be more acceptable in ſuch Places than the choiceſt Fruits, which muſt be expos'd to Servants, and others, ſo that they ſeldom can be preſerv'd in large Families until they are ripe. This Tree may be propagated by budding it on the *Almond* or *Plumb* Stocks, in the ſame manner as the other Sort of *Peaches*, and ſhould be planted in a good freſh Soil that is not over moiſt.

The other two Sorts are of humbler Growth, ſeldom riſing above five Feet high: Theſe may be budded upon *Almond-Stocks*, or propagated by *Layers*; they will alſo take upon *Plumb-Stocks*; but they are very apt to canker, after they have ſtood four or five Years upon thoſe Stocks, eſpecially that with double Flowers, which is tenderer than the other.

Theſe Shrubs make a very agreeable Variety amongſt low Flowering-trees, in ſmall Wilderneſs Quarters. The ſingle Sort flowers in the Beginning of *April*, and the double is commonly a Fortnight later.

I ſhall now proceed to mention the ſeveral Sorts of good *Peaches* which have come to my Knowledge; and though, perhaps, a greater Number of Sorts may be found in ſome Catalogues of Fruits, yet I doubt whether many of them are not the ſame Kinds call'd by different Names: For, in order to determine the various Sorts, it is neceſſary to obſerve the Shape and Size of the Flowers, as well as the different Parts of the Fruit; for this does ſometimes determine the Kind; when the Fruit alone is not ſufficient: Beſides, there is a vaſt Difference in the Size and Flavour of the ſame *Peach*, when planted on different Soils and Aſpects; ſo that 'tis almoſt impoſſible for a Perſon, though very converſant with theſe Fruits, to diſtinguiſh them, when brought from various Gardens.

The preſent Confuſion of the Names of Fruits hath been many times owing to the bringing over Trees from *France*; for the Perſons who are generally employed to bring over thoſe Trees for Sale, are intirely ignorant of their various Sorts, and do themſelves take 'em upon Truſt from the Perſons, who make it their Buſineſs to propagate great Quantities to ſupply the Markets of *France*, whither they are brought in Waggons, and ſold out in Parcels to thoſe Perſons who bring them into *England*. It alſo happens many times, that if they are receiv'd by right Names, theſe, in Length of Time, are loſt, or the Trees come into the Poſſeſſion of other Perſons, who not knowing the true Name of the Fruit, do often give them new Names, whereby there is ſuch a Confuſion in the Names of Fruit, as is impoſſible to rectify: And hence ſome Perſons have ſuppos'd a much greater Variety of *Peaches* than there is in Reality; tho' as the greateſt Part of theſe have been obtain'd from Seeds, ſo their Varieties may be multiply'd annually until there be no End of the Sorts. However, I ſhall content my ſelf with enumerating the principal Sorts now known in *England*, which are ſufficient for any Gentleman to make a Collection to continue through the whole Seaſon of Fruit.

1. The *White Nutmeg* (call'd by the *French*, *Petite-Avant-Peſche*) is the firſt ripe *Peach*: Its Juice is mus-

ky, if well expos'd, and is ripe the Beginning of *July*: It is a great Bearer, and if planted in two different Aſpects, the Fruit may be continu'd three Weeks in Perfection, otherwiſe 'tis ſoon gone after it is ripe, as is the Caſe with moſt other Summer Fruits. This ſhould have a *South-Eaſt* and *South-Weſt* Aſpect.

2. The *Red Nutmeg* (or *La Peſche de Troy*) is ripe towards the End of *July*. This is a great Bearer, and if well expos'd, is an extraordinary good Fruit: It is ſomewhat larger than the White, and is of a beautiful red Colour towards the Sun.

3. The *Yellow Alberge* ripens ſoon after the *Red Nutmeg*, but is not eſteem'd ſo good a Fruit: It is generally a good Bearer; the Fleſh is yellow within; and for Variety, there may be one Tree planted where there is Room enough.

4. The *Red Magdalaine* (or *Magdalene Rouge*) is a middle-ſiz'd Fruit; the Fleſh or Pulp is very delicious; it parts from the Stone where the Fleſh is red, and the Tree is a good Bearer. This ripens the Beginning of *Auguſt*, and ſhould have a *South* or *South-Eaſt* Aſpect.

5. The *White Magdalaine* (or *Magdalene Blanche*) is a fine large Fruit, when planted in a good Soil; the Fleſh is white, except near the Stone, where it is of a reddiſh Colour; it is very full of a rich viny Juice, and eaſily melts in the Mouth; it is a great Bearer, but is very ſubject to drop its Fruit, and is often invaded by Inſects, as are many other Sorts of rich *Peaches*. This ripens the Beginning of *Auguſt*.

6. The *Mignonne* (or, as it is commonly call'd, *Minion*) *Peach*, is an excellent fine Fruit; the Side next the Sun is of a beautiful red Colour, as is alſo the Fleſh next the Stone; the Pulp is very firm, and full of a rich Juice; it is a plentiful Bearer, and ripens the Beginning of *Auguſt*.

7. The *Italian Peach* (or *Peſche d' Italié*) is of an oval Shape ſomewhat pointed; the Fleſh is very delicate, and full of Juice, and red towards the Stone, which is flat, and ſharp pointed; it is a good Bearer, a hardy *Peach*, and ripens the Middle of *Auguſt*.

8. The *Early Newington* (or *Smith*'s *Newington*) is a very good *Peach*; the Pulp is firm, of a rich ſugary Flavour, and cloſely adheres to the Stone: This is very red on the Side next the Sun, as is alſo the Fleſh near the Stone. This ripens the Beginning of *Auguſt*.

9. *Les Druſelles* (or *Druſel Peach*) is of an oval Shape; the Skin is of a ſoft purple Colour next the Sun; the Fleſh is red, and dry, but of a very agreeable Flavour. This ripens the End of *Auguſt*.

10. The *Nobleſs* (or *Nobleſſ*) is a fair large *Peach*; the Fleſh comes clean from the Stone; the Pulp is melting, and full of a delicious Juice, and is of a reddiſh Colour, next the Stone: It is a good Bearer, and ripens the Beginning of *Auguſt*.

11. *La Chevreuſe* (or *Belle Chevreuſe*) is of a bright red Colour next the Sun; the Fruit is longiſh, and pretty large; the Pulp is full of a delicate ſweet Juice, and ripens the latter End of *Auguſt*.

12. The *Chancellor* (or *Peſche Chanceliere*) was rais'd from the Stone of the *Chevreuſe Peach*, in the Garden of the *Chancellor Seguire* in *France*, from whence it had its Name. It is a very large fair Fruit, full of a delicate ſugary Juice, and is eſteem'd

amongſt the beſt Sort of *Peaches* in *France*. It ripens the End of *Auguſt*.

13. The *Montauban* is a fair handſome *Peach*, of a deep red Colour on the Side next the Sun, but of a pale Green next the Wall; the Fleſh is melting, and parts from the Stone, where it is of a faint red Colour. This is a very good Bearer, and ripens the Beginning of *Auguſt*.

14. The *Royal George Peach*. This is a middle-ſiz'd Fruit, pretty round, with a deep Furrow running lengthwiſe: It is of a dark red Colour on the Side next the Sun, and of a paler Colour next the Wall; the Skin is cover'd over with a downy Subſtance, and is full of red Spots; the Fleſh is melting, of a delicate Flavour, and of a yellowiſh Caſt; the Stone is large and of a deep red Colour. This ripens the latter End of *Auguſt*.

15. The *Nivette Peach* is of a middling Size, of an oval or oblong Shape, a little compreſſed on the Sides, it is of a yellowiſh Colour, marbled with Red, and cover'd with a ſoft, downy Subſtance; the Fleſh is ſoft, melting, of a yellow Colour, and parts from the Stone; The Juice is very rich: It ripens the Beginning of *September*.

16. The *Violet Peach* (or *Peſche Violette*) is ſomewhat long, of a middle Size; the Pulp is melting, and its Juice is of a vinous Flavour. This is, by the *French*, eſteem'd the Queen of Fruits. It ripens towards the End of *Auguſt*, and is a plentiful Bearer.

17. The *Portugal Peach* is a fair, large, beautiful Fruit, of a deep red Colour towards the Sun, which fades off to a light Green next the Wall; the Skin has a ſoft Down upon it, and is pretty full of red Spots; the Fleſh is very firm, of a rich vinous Flavour, and adheres cloſely to the Stone, which is ſmall for the Size of the Fruit, but very rough. This ripens the Beginning of *September*.

18. The *Purple Alberge* (or *La Peſche Alberge Violette*) is a middle-ſiz'd Fruit, of a dark Purple or Violet Colour on the Side next the Sun, which goes off to a dark Red next the Wall: The Fleſh is yellow, and parts from the Stone, where it is red; it is full of a rich vinous Juice, and ripens towards the End of *Auguſt*.

19. The *Old Newington* is eſteem'd one of the beſt *Peaches* in *England*; it is a large fair Fruit, of a lively red Colour next the Sun, which goes off to a yellowiſh Green next the Wall; the Fleſh is firm, and cloſely adheres to the Stone; it is full of a delicious rich Juice, and of a deep red next the Stone. This is accounted an indifferent Bearer, which is wholly owing to its Management in Pruning, for I have had it bear extremely well in a Standard, and the Fruit has been deeper colour'd, and of richer Flavour than thoſe againſt Walls.

20. *La Teton de Venus* (or *Venus's Breaſt*) is a middle-ſiz'd Fruit, rather long than round, having a very deep Sulcus or Furrow, which divides it like a double Fruit; the two Sides of which riſe ſomewhat like a Woman's Breaſt, from whence it had its Name; the Fleſh is very white, with a little Bluſh of Red next the Sun; it is melting, and full of a high-flavour'd Juice. This ripens the latter End of *Auguſt*.

21. *La Peſche Pourprée* (or *Purple Peach*) is a fair round Fruit, of a dark red Colour next the Sun, which goes off to a paler Red next the Wall: The Fleſh next the Stone is very red: The Juice is of

a moſt delicious Flavour when the Fruit is full ripe. This ripens the Beginning of *September*.

22. The *Pavy Royal* (or *Peſche Royale*) is a large round Fruit, of a dark red or black Colour next the Sun, which goes off to a paler Red next the Wall: The Fleſh comes from the Stone, where it is very red; the Juice is exquiſitely rich, and equal to, if not exceeding, all other *Peaches* yet known, provided it grows upon a Soil rather dry than moiſt, and is expos'd to a good Aſpect. This ripens the Beginning of *September*.

23. The *Admirable* is a large round Fruit, of a fine red Colour next the Sun, which goes off to a greeniſh Yellow next the Wall; the Fleſh is firm, and full of rich ſugar'd Juice; it parts from the Stone, where it is of a deep red Colour. This is a great Bearer, and ripens toward the End of *Auguſt* or the Beginning of *September*.

24. *La Pavie rouge de Pompone, ou Monſtreux* (or *the Monſtrous Pavy of Pompone*) is the largeſt *Peach* yet known; it is of a globular Shape, deeply divided into two Parts; of a beautiful Red next the Sun, which goes off to a bright Yellow next the Wall; the Fleſh is melting, and of a rich vinous Flavour. It ripens the Middle of *September*. This ſhould have a *South-Eaſt* Aſpect, and the Shoots ſhould be laid very thin againſt the Walls, for if there are many Fruit upon a Tree, they ſeldom ripen, or are well-flavour'd.

25. The *Catherine Peach* is a fine large Fruit (eſpecially when not left too thick upon the Trees;) the Skin is cover'd with a ſoft Down, and is of a dull red Colour next the Sun, which goes off to a whitiſh Green next the Wall; the Fleſh is full of a rich vinous Juice, and, in a good Seaſon, comes the neareſt to the old *Newington Peach* of any other Sort. This is a great Bearer, but ſhould be planted in a warm Soil, and to a *South Eaſt* Aſpect. It ripens in the Middle of *September*.

26. The *Rumbullion* is a middle-ſiz'd Fruit, rather round than long, deeply divided by a Sulcus or Furrow in the Middle, of a pleaſant red Colour next the Sun, but of a light yellow next the Wall: The Fleſh is of a bright Yellow, and parts from the Stone, where it is of a deep red Colour. The Juice is of a rich vinous Flavour; 'tis a good Bearer, and ripens the Middle of *September*.

27. The *Malacoton* (or *Cotton Apple*) is a large fair *Peach*; the Skin is cover'd over with a thick downy Subſtance, from whence it took its Name; it is of a beautiful red Colour next the Sun, but of a light Yellow next the Wall; the Fleſh is firm, and full of a rich vinous Juice, and when duly ripen'd, is an excellent Fruit. This ripens towards the latter End of *September*. It ſhould have a warm Soil, and the Branches muſt be laid very thin againſt the Wall, otherwiſe the Fruit ſeldom comes to any thing.

28. *La Sanguinolle* (or the *Bloody*) *Peach*, is a middle-ſiz'd Fruit, whoſe Fleſh is of a deep red Colour within, from whence it had its Name; it parts from the Stone; the Outſide next the Sun is of a deep Red, but the Side next the Wall is of a greeniſh yellow Colour. This ripens in *October*, ſo that unleſs the *Autumn* proves very favourable, it is not good for any thing.

There are ſeveral other Sorts of *Peaches* which are very good in the South of *France* and other warm Countries, which with us do rarely ripen ſo as to be eatable, for which reaſon they are not worth cultivating; ſuch are, the *Violette Tardive*, or *Late Violet*; *La Corbeil*, *La Peſche Noix*; the *Double-flower'd*, &c. which ſeldom ripen in *France* until the latter End of *October*, when the Nights with us are long, and froſty, the Seaſon often very wet, and cold; ſo that theſe Fruits will be watery, inſipid, and very unwholſome in this Country.

The *French* diſtinguiſh thoſe we call *Peaches* into two Sorts, *viz.* *Pavies*, and *Peaches*; thoſe are called *Peaches* which quit the Stone; and thoſe whoſe Fleſh cloſely adheres to the Stone, are call'd *Pavies:* Theſe are much more eſteem'd in *France* than the *Peaches*; though, in *England*, the latter are preferr'd to the former by many Perſons.

The *French* do alſo diſtinguiſh them into *Male* and *Female*; the *Pavies* they make to be the *Male*, and the *Peaches* the *Female:* But this Diviſion is without Foundation, ſince the Kernels of both Sorts will produce Trees equally; for the Flowers of *Peach-trees* are generally hermaphrodite, and have all the Parts of Generation in them, ſo that there is no Neceſſity of ſuppoſing any of them to be intirely *Male* or *Female:* But it is likely that this Diſtinction is of long ſtanding, before Perſons had a perfect Notion of *Male* and *Female* in Plants, or at leaſt they did not know how to diſtinguiſh them aſunder.

The *Nectarines* (as I have in another Place ſaid) are by the *French* call'd *Brugnons*, which differ from the other two Sorts, in having a firm, hard Fleſh, and the Skins quite ſmooth, without any Down upon them. The Sorts of theſe I have already mention'd under the Article *Nectarines*, to which the Reader may readily turn, therefore I ſhall not repeat them in this Place.

I ſhall now ſet down the good Qualities of *Peaches*, by which any Perſon may judge of their Worth.

A good *Peach* ought to have a firm Fleſh; the Skin ſhould be thin, of a deep or bright red Colour next the Sun, and of a yellowiſh Caſt next the Wall; the Fleſh ſhould be of a yellowiſh Colour, full of Juice, which ſhould be high-flavour'd; the Stone ſmall, and the Pulp or Fleſh very thick. When a *Peach* hath all theſe Qualities, it may be eſteem'd a valuable Fruit.

All the different Sorts of *Peaches* have been originally obtain'd from the Stones; which being planted, do produce new Varieties, as do the Seeds of all other Fruits: So that where Perſons have Garden enough to allow Room for propagating theſe Fruits from Seeds, there is no Doubt but many good Sorts may be obtained, which will be better adapted to our Climate than ſuch as are brought from warmer Countries; though it is true, that there will be many of them good for nothing, as is the Caſe of moſt Fruits and Flowers which are produc'd from Seeds, amongſt which there may be ſome valuable Kinds, ſuperior to thoſe from whence the Seeds were taken, yet there is always a great Number which are little worth: but if we can obtain but two or three valuable Sorts, it is ſufficient to make Amends for the Trouble of raiſing them: But where Perſons are ſo curious as to plant the Stones of theſe Fruits, great Regard ſhould be had to the Sorts; and if the Fruit were permitted to remain upon the Trees until they dropp'd off, the Kernels would be fitter for planting, and more likely to grow. The beſt Sorts for ſowing are thoſe whoſe Fleſh is firm, and cleaves to the Stone; and from amongſt theſe you ſhould chuſe ſuch as ripen pretty early, and have a rich vinous Juice; from which Sorts ſome good Fruit may be expected.

Theſe Stones ſhould be planted in Autumn, on a Bed of light dry Earth, about three Inches deep, and four Inches aſunder; and in the Winter the Bed ſhould be cover'd to protect them from the Froſt, which if permitted to enter deep into the Ground will deſtroy 'em: In the Spring, when the Plants come up, they ſhould be carefully clear'd from the Weeds, which ſhould alſo be obſerv'd throughout the Summer; and if the Spring ſhould prove very dry, if you refreſh them now and then with a little Water; it will greatly promote their Growth: In this Bed they ſhould remain until the following Spring; when they ſhould be carefully taken up, ſo as not to break their tender Roots, and tranſplanted into a Nurſery, in Rows three Feet aſunder, and eighteen Inches diſtant Plant from Plant in the Rows, obſerving to lay a little Mulch upon the Surface of the Ground about their Roots, to prevent its drying too faſt: And if the Spring ſhould prove very dry, you ſhould give them a little Water once a Week, until they have taken Root; after which, they ſhould be conſtantly kept clear from Weeds, and the Ground between the Rows carefully dug every Spring, to looſen it, ſo as that the tender Fibres may ſtrike out on every Side.

In this Nurſery they may remain two or three Years; after which, they ſhould be tranſplanted, where they are to remain to produce Fruit.

In removing theſe Trees, you ſhould obſerve to prune their downright Roots (if they have any) pretty ſhort, and to cut off all bruiſed Parts of the Roots, as alſo all the ſmall Fibres, which do generally dry, and when left upon the Roots, after planting again, grow mouldy, and decay; ſo that they are injurious to the new Fibres which are ſhot out from the Roots, and very often prevent the Growth of the Trees: But you ſhould by no means prune their Heads; for the Plants which are produced from Stones, are generally of a more ſpongy Texture, and ſo more liable to decay when cut, than thoſe which are budded upon other Stocks. Beſides, as theſe Trees are deſign'd for Standards (for it is not proper to plant them againſt Walls until you ſee the Produce of their Fruit, to ſhew which of them deſerves to be cultivated;) ſo they will never require any other pruning, but only to cut out decay'd Branches, or ſuch as ſhoot out very irregular from the Sides; for more than this, is generally very injurious to them.

In planting theſe Trees, it will be the better way to diſpoſe them ſingly in the Quarters of the Kitchen-Garden, where they will thrive and produce Fruit much better, than if they are planted pretty near each other in Rows; and as they are thus ſingly diſpos'd, they will not do much Injury to the Crops which grow under them.

When they have produced Fruit, you will ſoon be a Judge of their Goodneſs: therefore ſuch of them as you diſlike may be deſtroy'd; but thoſe which are good may be propagated by inoculating them upon other Stocks, which is the common Method now practis'd to propagate theſe Fruits: Therefore I ſhall now proceed to treat of that more particularly; in the doing of which, I ſhall ſet down the Method now commonly practis'd by the Nurſery Gardeners; and then propoſe ſome few Things of my own, as an Improvement thereon, for ſuch Perſons who are very curious to have good Fruit. But firſt,

You ſhould be provided with Stocks of the *Muſcle* and *White Pear-Plumbs*, which are generally eſteem'd the two beſt Sorts of *Plumbs* for Stocks to inoculate *Peaches* and *Nectarines* upon; as alſo ſome *Almond* and *Apricock* Stocks, for ſome tender Sorts of *Peaches* which will not grow upon *Plumb* Stocks: Theſe ſhould be all produced from the Stone (as hath been already directed in the Article of a *Nurſery*) and not from Suckers, for the Reaſons there laid down.

When theſe Stocks have grown in the Nurſery two Years, they will be ſtrong enough to bud, the Seaſon for which is commonly about *Midſummer*, when you ſhould make choice of ſome good Cuttings of the Sorts of Fruit you intend to propagate, always obſerving to take them from healthy Trees, and ſuch as do generally produce a good Quantity of well-taſted Fruit; for it is very certain, that any Sort of Fruit may be ſo far degenerated, where this Care is wanting, as not to be like the ſame Kind. Beſides, whenever a Tree is unhealthy, the Buds taken from that Tree will always retain the Diſtemper, in a greater or leſs Degree, according as it hath imbib'd a greater or leſs Quantity of the diſtemper'd Juice. Thus, for Inſtance, where a *Peach* or *Nectarine* Tree hath been greatly blighted, ſo as that the Shoots have grown buſled, and the Leaves curled up to a great Degree, that Diſtemper is ſeldom recover'd again by the greateſt Art, or at leaſt not under ſeveral Years Management; for let the Seaſons prove ever-ſo favourable, yet theſe Trees will continually ſhew the ſame Diſtemper: Which many Perſons are ſo weak as to ſuppoſe a freſh Blight; whereas in reality it is no other but the Remains of the former Sickneſs, which are ſpread and intermix'd with all the Juices of the Tree; ſo that whatever Buds are taken from ſuch Trees, will always retain a Part of the Diſtemper.

The Cuttings with which you are thus to be provided, ſhould always be taken from the Trees either in a Morning or Evening, or elſe in a cloudy Day; for if they are cut off when the Sun is very hot, the Shoots will perſpire ſo freely, as to leave the Buds deſtitute of Moiſture, which is often the Cauſe of their miſcarrying; and the ſooner theſe are uſed, when cut from the Trees, the better they will take. The Manner of this Operation being fully explain'd under the Article of *Inoculation*, I ſhall not repeat it in this place. The Management of theſe Trees during their remaining Time in the *Nurſery*, is likewiſe fully ſet down under that Article: I ſhall therefore proceed to the Planting of theſe Trees, either againſt Walls, Eſpaliers, or for Standards. But as the future Succeſs of theſe Trees doth in a great meaſure depend upon the Soil in which they are planted; ſo I ſhall briefly ſet down the Method of Preparing the Earth for the Borders where they are deſign'd to grow.

The beſt Earth for *Peach* Trees, is ſuch as is taken from a Paſture Ground, that is neither too ſtiff and moiſt, nor over-dry, but of a middling Nature: This ſhould be dug from the Surface of the Ground about ten Inches deep, taking the Turf with it; and ſhould be laid in Heaps eight or ten Months before it be uſed, during which Time it ſhould be often turn'd, to rot the Turf, and break the Clods, whereby it will be render'd very light, and eaſy to work; and about the Beginning of *September* you ſhould carry it into the Garden, and make the Borders, which muſt be rais'd in Height proportionable to the Moiſture of the Garden; for if the Ground be very wet, it will be adviſeable to lay ſome Rubbiſh in the Bottom of the Border, to drain off the Moiſture, and to prevent the Roots of the Trees from running downwards; then raiſe the Border of Earth at leaſt a Foot above the Level of the Ground, ſo that the Roots of the Trees may always remain dry: but if the Ground be pretty dry, the Borders ſhould not be rais'd above four or five Inches higher than the Surface, which will be ſufficient to allow for their ſinking.

As to the Breadth of theſe Borders, that can't be too great; but they ſhould never be leſs than ſix Feet broad where Fruit-Trees are planted; for when the Borders are made very narrow, the Roots of the Trees will be ſo confin'd in four or five Years Time, that they will ſeldom thrive well after. The Depth of theſe Borders ſhould not be greater than two Feet; for where they are prepared to a great Depth, it only intices the Roots of the Trees downward, which may be the Cauſe of their future Barrenneſs; for their Roots being got down below the Influences of the Sun and Showers, do imbibe a great Quantity of crude Juices; which only add to the luxuriant Growth of the Trees, and deſtroy their Fruitfulneſs: beſides, whatever Fruit are produced from ſuch Trees, are not near ſo well-taſted, as are thoſe which grow upon thoſe Trees whoſe Roots lie near the Surface, and enjoy the kindly Benefit of the Sun's Heat, to correct and digeſt whatever Crudities there may be in the Earth.

Your Borders being thus prepar'd ſhould lie about three Weeks or a Month to ſettle, by which time the Seaſon for Planting will be come, which ſhould be perform'd as ſoon as the Leaves begin to decay, that the Trees may take Root before the Froſt comes on to prevent them: Then you ſhould carefully take up the Trees out of the Nurſery, ſo as not to break or bruiſe their Roots; and with a ſharp Knife you muſt prune the extreme Parts of them, and cut off ſmooth any broken or bruiſed Roots; as alſo all the ſmall Fibres ſhould be taken off, for the Reaſons before given.

And having thus prepar'd your Trees, you ſhould meaſure out their Diſtance, which ought never to be leſs than fourteen Feet; but where the Ground is very good, they ſhould be planted ſixteen Feet aſunder. This I doubt not, will be thought too great a Diſtance by many Perſons, eſpecially ſince it is contrary to the general Practice at this Time: but I am ſatisfied, whoever ſhall try the Experiment, will find it no more than is ſufficient for theſe Trees, where they are rightly managed; for if they do take kindly to the Soil, their Branches may be ſo train'd, as to furniſh all the lower-part of the Wall in a few Years; which is what ſhould be principally regarded, and not, as is too often the Practice, run up the Shoots in Height, and leave all the lower Part of the Tree deſtitute of bearing Wood; ſo that, in a few Years, there will not be any Fruit but upon the upper Part of the Trees: which alſo muſt be the Caſe where they are planted too cloſe; becauſe there being no Room to extend the Branches on either Side, they are obliged to lead them upright, which produces the before-mention'd ill Effect.

And here I can't help taking notice of another very great Error in planting Wall-Fruit; which is, the placing Standard, or Half-Standard Trees, between the others, to cover the upper Part of the Wall, and to produce Fruit, until the Trees underneath are grown up ſufficient to furniſh the Walls, when the Standards are to be taken away: This is done, without conſidering that the greater Number of Trees are planted in a ſmall Compaſs, the leſs Nouriſhment they can receive, and ſo, conſequently, muſt be the weaker; for the ſame Space of Ground can't nouriſh twenty Trees equally as well as it could ten: So that whatever Strength the Standard Trees may have, the Dwarfs will be proportionably weaker: And it is a common Obſervation, that moſt Trees extend their Roots as far under-ground, as their Branches ſpread above-ground; ſo that there ſhould always be the ſame Allowance given to the Wall-Trees, if we would have them ſtrong and vigorous; therefore the building very high Walls for Fruit is to no Purpoſe, for a ten or twelve Foot Wall will be ſufficient for moſt Sorts of Fruit.

But to return to Planting: After you have mark'd out the Places where each Tree is to ſtand, you muſt with your Spade make a Hole wide enough to receive the Roots of the Tree; then you ſhould place it down, obſerving to turn the Bud outwards, that the wounded Part of the Stock may be hid, and let the Stem of the Tree be placed about four or five Inches from the Wall, with its Head inclining thereto; then fill in the Earth with your Hands, obſerving to break the Clods, that the Earth may fall in between the Roots, ſo as no void Spaces may be left about them. You ſhould alſo gently ſhake the Tree with your Hands, to ſettle the Earth down the better; then with your Foot gently preſs down the Earth about the Stem; but do not tread it down too hard, which is many times a very great Fault; for when the Ground is inclinable to bind, the treading of it cloſe doth often render the Ground ſo hard, as that the tender Fibres of the Roots can't ſtrike into it, whereby the Tree remains at a Stand for ſome Time; and if the Earth be not looſen'd in Time, it frequently dies; ſo that whenever you obſerve the Earth of your Borders to be bound, either by great Rains, or from any other Cauſe, you ſhould dig and looſen it again, obſerving always to do it in dry Weather, if in Winter or Spring; but in Summer it ſhould be done in a moiſt Seaſon.

After you have thus planted your Trees, you ſhould faſten their Heads to the Wall, to prevent their being ſhaken by the Wind, which would diſturb their Roots, and break off the tender Fibres ſoon after they were produced, to the no ſmall Prejudice of the Trees: You ſhould alſo lay ſome Mulch upon the Surface of the Ground about their Roots, to prevent the Froſt from penetrating the Ground, which would injure, if not deſtroy the ſmall Fibres.

Theſe Things being duly obſerved, they will require no farther Care 'till the *February* following; towards the latter end of which Month, or the beginning of *March*, according as the Seaſon is earlier or later, you muſt cut off the Heads of the new-planted Trees, leaving only four or five Eyes above the Bud; in doing of which, you muſt be very careful not to diſturb their Roots; to prevent which, you ſhould place your Foot down cloſe to the Stem of the Tree, and take faſt hold of that Part of the Stock below the Bud with one Hand, to hold it ſteady, while with the other Hand you gently ſlope off the Head of the Tree with a ſharp Knife at the intended Place, which ſhould always be juſt above an Eye: This ſhould always be done in dry Weather; for if there ſhou'd be much Rain ſoon after it is done, the Wet will enter the wounded Part, and damage the Tree: Nor ſhould it be done in froſty Weather, for the ſame Reaſon; for that would enter the wounded Part, and prevent its healing over. After you have headed the Trees, you ſhould gently looſen the Earth of the Borders, to admit the Fibres of the Roots: but you muſt be very careful, in doing of this, not to cut or bruiſe their new Roots, which would alſo damage them: And if the Mulch which was laid about their Roots in Autumn, be rotted, you may dig it into the Border at ſome Diſtance from the Roots of the Trees; and when the dry Weather comes on, you ſhould pare off ſome Turf from a Paſture Ground, which ſhould be laid upon the Surface of the Border about the Roots of the Trees, turning the Graſs downwards, which will preſerve a gentle Moiſture in the Earth better than any other Sort of Mulch; and this will not harbour Inſects, as do moſt Sorts of Dung and Litter, to the no ſmall Detriment of the Trees.

In watering of theſe Trees, you ſhould obſerve to do it with a Noſſel upon the Watering-Pot, ſo as to let it out in Drops; for when it is haſtily poured down, it cauſes the Ground to bind; and if you water over the Head of the Tree, it will be of great Service to it: Your Waterings ſhould not be repeated too often, nor ſhould it be given them in great Quantity, both which are very injurious to new-planted Trees.

In the Middle of *May*, when theſe Trees will have ſeveral Shoots ſix or eight Inches in Length, you ſhould nail them to the Wall, obſerving to train them horizontally, rubbing off all fore-right Shoots, or ſuch as are weak, whereby thoſe which are preſerv'd will be much ſtronger: But if there are not more than two Shoots produced, and thoſe very ſtrong, you ſhould at the ſame time nip off their Tops, which will cauſe each of 'em to puſh out two or more Shoots, whereby the Wall will be better ſupply'd with Branches: You muſt alſo continue to refreſh them with Water in dry Weather, during the whole Seaſon, otherwiſe they will be apt to ſuffer; for their Roots having but little hold of the Ground the firſt Year after tranſplanting, if the Seaſon ſhould prove very dry, 'twill greatly retard their Growth, if due Care be not taken to water them.

In the Beginning of *October*, when you obſerve the Trees have done ſhooting, you ſhould prune them; in doing of which you muſt ſhorten the Branches in proportion to the Strength of the Tree, which, if ſtrong, may be left eight Inches long; but if weak, ſhould be ſhorten'd to four or five: Then you ſhould train them horizontally to the Wall (as was before directed;) ſo that the Middle of the Trees may be void of Branches; for that Part of the Tree will be eaſily furniſh'd with Wood afterwards: whereas, if the Shoots are train'd perpendicularly to the Wall, thoſe which are the ſtrongeſt will draw the greateſt Share of the Sap, from the Roots, and mount upwards; ſo that the Side-Branches will be deprived of their Nouriſhment, and grow weaker, until they many times decay; and this is the Reaſon that we ſee ſo many *Peach-Trees* with one upright Stem in the Middle, and the two Sides wholly unfurniſh'd with Branches, whereby the Middle of each Tree cannot produce any Fruit, that being fill'd with large Wood, which never produces any Bearing Shoots: Nor can the two Sides of the Trees be regularly fill'd with fruitful Branches, when this Defect happens to them; therefore this Method ſhould be carefully obſerv'd in the training up young Trees; for when they are permitted to run into Diſorder at firſt, it will be impoſſible to reduce them into a regular healthful State afterwards, the Wood of theſe Trees being too ſoft and pithy to admit of being cut down again (as may be practis'd on many other hardy Fruit-Trees, which will ſhoot out vigorouſly again;) whereas theſe will gum at the Places where they are wounded, and in a few Years intirely decay.

The Summer following, when the Trees begin to ſhoot, you ſhould carefully look over them, to rub off all fore-right Buds, or ſuch as are ill-plac'd, and train thoſe which are deſign'd to remain horizontally to the Wall, in their due Order as they are produced; for this is the principal Seaſon when you can beſt order the Trees as you would have them; whereas if they are neglected until *Midſummer*, as is the common Practice, a great Part of the Nouriſhment will be exhauſted by fore-right Shoots, and other uſeleſs Branches, which muſt afterwards be cut off; and hereby the remaining Shoots will be render'd very weak, and perhaps ſome part of the Wall be intirely unfurniſh'd with Branches; which might have been eaſily ſupply'd in the Beginning of *May*, by ſtopping ſome of the ſtronger Shoots, in ſuch Parts of the Tree where there is a Neceſſity for more Branches, which would cauſe each of them to ſhoot out two or more Side-branches below the Ends of the Shoots, which may be guided into the vacant Parts of the Tree, as they are produced, ſo as that every Part may be regularly furniſh'd with proper Wood, which is the greateſt Beauty and Excellency of Wall-Trees: But you ſhould always forbear ſtopping the Shoots in Summer, where there is not a Neceſſity for Branches to fill the Wall; for there cannot be a greater Fault committed, than that of multiplying the Number of Shoots, ſo as to cauſe a Confuſion, whereby the Branches will be too weak to produce good Fruit: Beſides, when they are too cloſely laid in upon the Wall, the Air is excluded from the Shoots by the great Number of Leaves, ſo that they are never duly ripen'd, and, conſequently, what Fruit is produced thereon can't be ſo well-taſted as thoſe which are produced upon ſuch Trees where the Shoots receive all the Advantages of Sun and Air to maturate them.

Thus having ſet down the Method of Training up young Trees, I ſhall now proceed to their Pruning, and future Management; which being the ſame as with full-grown Trees, will ſerve for general Directions how to manage theſe Sorts of Fruit.

In the Pruning of *Peach* and *Nectarine* Trees (which require the ſame Culture) the two following Rules ſhould be ſtrictly obſerv'd; *viz* 1ſt, That every Part of the Tree be equally furniſh'd with Bearing-Wood; and, 2dly, That the Branches are not laid in too cloſe to each other, for the Reaſons before laid down, with ſome others, which will be hereafter inſerted. As to the firſt, it muſt be obſerv'd, that all theſe Trees do produce their Fruit upon the young Wood, either of the preceding Year, or at moſt the two Years Shoots, after which Age they do not bear: Therefore the Branches ſhould be pruned ſo as to cauſe them to produce new Shoots annually in every Part of the Tree; which cannot be done in the ordinary Method of Pruning, where Perſons neglect their Trees at the Seaſon when they are moſt capable of Management, which is in *May*, at which Time the luxuriant Growth of Branches may be check'd by pinching, and new Shoots produced where they are wanting, by ſtopping the neighbouring Branches; which Shoots being produced at that Seaſon, will have Time enough to ripen and gain Strength before the Autumn comes on; whereas all thoſe Shoots which are produced after the Beginning of *June*, will be crude and pithy; and tho' they may ſometimes produce a few Bloſſoms, yet thoſe do rarely bring Fruit; nor are the future Branches good which are produced from ſuch Wood, the Veſſels being too large to ſtrain the Juices, ſo that they eaſily admit great Quantities of crude Nouriſhment to paſs through them. Therefore thoſe Perſons who only regard their Wall Trees at two different Seaſons, *viz.* the Winter and Midſummer Pruning, can't poſſibly have them in good Order; for when all the Branches which were produced in the Spring are permitted to remain until the Middle or Latter-end of *June* (as is the common Practice) ſome of the moſt vigorous will draw the greateſt Part of the Nouriſhment from the weaker Branches, which, when the ſtrong ones are taken off, will be too weak to produce fair Fruit; and hereby the Strength of the Trees is exhauſted to nouriſh the uſeleſs Branches, which are annually cut off again: And thus are too many Trees managed, and at the ſame time Complaints made of their Luxuriancy; becauſe two or three Shoots, by drawing in the greateſt Share of the Nouriſhment, grow very ſtrong and woody: (whereas, if the Nouriſhment had been equally diſtributed to a regular Quantity of Branches, there would be no Sign of their too great Strength) until, by often cutting off theſe vigorous Branches, the Trees are either intirely deſtroy'd, or at leaſt render'd ſo weak as not to be able to produce Fruit: For altho' by thus weakening the Branches, it is often the Means to produce a good Number of Bloſſoms (as may many times be obſerved alſo upon autumnal Shoots) yet the utmoſt of their Strength is ſpent in expanding the Flowers, ſo that they rarely produce Fruit, and very often the greateſt Part of the Branches die ſoon after, which is ſuppos'd to be occaſion'd by a Blight (as I have elſewhere ſaid) when in reality it is nothing leſs than the Fault of thoſe who have the Management of the Trees. It is therefore of the greateſt Conſequence to Wall-Trees, eſpecially of theſe Sorts, to go over them two or three times in the Month of *May*, to rub off all irregular Shoots, and to train in the Branches that are left in due Order to the Wall, that each Shoot may have an equal Advantage of Sun and Air, both of which are abſolutely neceſſary to ripen and prepare the Wood for the next Year's Bearing.

And by duly obſerving the Trees at this Seaſon, there will not be Occaſion for ſo much Cutting, as is often practis'd on *Peach-Trees*, to their great Injury; for their Wood Branches are generally ſoft, tender, and pithy, which, when greatly wounded, are not healed over again ſo ſoon as many other Sorts of Trees; and the Wet inſinuating into the wounded Parts, doth often cauſe the Branches to canker and die; which may be entirely avoided, by the gentle, eaſy Method of Pinching and Rubbing off the Buds in the Spring-ſeaſon, which never makes any Wounds on the Tree; and hereby a vaſt deal of Labour is ſaved; for one Perſon who is ready at this Buſineſs will go over a great Quantity of Walling in a Day; whereas if the Trees are permitted to grow rude all the Spring, they will require ſix times the Labour to reduce 'em into Order. Beſides, it is a great Diſadvantage to the Fruit, in permitting the Branches of the Trees to extend from the Wall, and ſhade 'em; and when they have grown under the Shelter of theſe Branches and Leaves all the Spring; until Midſummer, then by pruning off ſome of theſe Shoots, and nailing the others cloſe to the Wall, the Fruits are ſuddenly expos'd to the Sun and Air, whereby they receive a very great Check, and are not only retarded in their Growth, but often render'd ill-taſted, and have tough Skins.

The Diſtance which the Branches of theſe Trees ſhould be allow'd againſt the Wall muſt be proportion'd to the Size of the Fruit, or the Length of the Leaves: For if we obſerve how the Branches of Trees are naturally diſpos'd to grow, we ſhall always find them plac'd at a greater or leſs Diſtance, as their Leaves are larger or ſmaller (as I have already obſerv'd under the Article of *Leaves*:) And there is no ſurer Guide to a curious Artiſt than Nature, from whence a Gardener ſhould always be directed in every Part of his Profeſſion; ſince his Buſineſs is to aid and aſſiſt Nature, where ſhe is not capable of bringing her Productions to Maturity, or where there is Room to make conſiderable Improvements by

Art; which cannot be any otherwiſe effected, than by gently aſſiſting her in her own Way.

But to return to Pruning of theſe Trees: The Branches being carefully train'd in, as before directed in the Spring and Summer Seaſons; we come now to treat of the Winter Pruning, which is commonly perform'd in *February* or *March*: but the beſt Seaſon for this Work is about *Michaelmas*, when their Leaves begin to fall, which will be early enough for their Wounds to heal before the Froſt comes on, ſo that there will be no Danger of their being hurt thereby: And the Branches of the Trees being proportion'd to the Strength of the Roots at that Seaſon, all the aſcending Sap in the Spring will be employ'd to nouriſh only thoſe uſeful Parts of the Branches which are left: whereas if they are left unprun'd 'till *February*, the Sap in the Branches being then in Motion, as may be obſerv'd by the ſwelling of the Buds, the greateſt Part of it will be drawn up to the extreme Parts of the Branches, to nouriſh ſuch Bloſſoms as muſt be afterwards cut off: And this may be eaſily known, by obſerving the ſtrongeſt Shoots at that Seaſon, when you will find the extreme Buds to ſwell faſter than moſt of the lower ones; for there being no Leaves then upon the Branches to detain the Sap to nouriſh the lower Buds, the upper ones will always draw from thoſe below.

But it is a conſtant Practice amongſt Gardeners, founded upon long Experience, to prune weak Trees early in the Winter, and luxuriant Trees late in the Spring, in order to check their Luxuriancy. Now it is evident, that this Check does not proceed from any conſiderable Loſs of Sap at the Wounds of the pruned Tree (excepting a few of the bleeding Trees, when cut at that Seaſon) but muſt ariſe from ſome other Cauſe; for by ſeveral Experiments made by the Reverend Mr. *Hales*, in fixing mercurial Gages to the Stems of freſh cut Trees, he found thoſe Wounds were conſtantly in an imbibing State, except the Vine in the bleeding Seaſon.

When a weak Tree is pruned early in the Beginning of Winter, the Orifices of the Sap-veſſels are clos'd up long before the Spring; and conſequently, when in the Spring and Summer, the warm Weather advancing, the attracting Force of the perſpiring Leaves is not then weakned by many Inlets from freſh Wounds, but is wholly exerted in drawing Sap from the Root: whereas, on the other hand, when a luxuriant Tree is pruned late in the Spring, the Force of its Leaves to attract Sap from the Root will be much ſpent and loſt at the ſeveral freſh cut Inlets.

Beſides, if it were no Advantage to the Trees to prune them at this Seaſon (which, I think no one will have Reaſon to doubt, after making the Trial) but that it only ſucceeds as well as the Spring Pruning; yet there is a great Advantage in doing of it at *Michaelmas*; for that being a much more leiſure Seaſon with Gardeners than the Spring, they will have more Time to perform it carefully; and then they will not have too many Things come together, which may require to be immediately executed: for the Spring being the principal Seaſon for Cropping their Kitchen-Garden, and attending their Hot-beds, if they are diſingaged from the Buſineſs of Pruning at that

Time, it will be of great Advantage, eſpecially where there is a great Quantity of Walling. And here is alſo another Benefit in Pruning at this Seaſon, which is, the having the Borders at liberty to dig and make clean before the Spring, ſo that the Garden may not appear in Litter at that Seaſon.

Having ſaid thus much concerning the Time of Pruning, I ſhall now proceed to give ſome general Directions how it is to be perform'd on *Peach* and *Nectarine* Trees, which require a very different Management from moſt other Sorts of Fruits.

In Pruning of theſe Trees, you ſhould always obſerve to cut them behind a Wood-bud (which may be eaſily diſtinguiſh'd from the Bloſſom-buds, that are ſhorter, rounder, and more turgid than the Wood-buds;) for if the Shoot have not a leading Bud where it is cut, it is very apt to die down to the next leading Bud; ſo that what Fruit may be produced above that, will come to nothing, there being always a Neceſſity of a leading Bud to attract the Nouriſhment; for it is not ſufficient that they have a Leaf-bud, as ſome have imagined, ſince that will attract but a ſmall Quantity of Nouriſhment; the great Uſe of the Leaves being to perſpire away ſuch crude Juices as are unfit to enter the Fruit: The Length you ſhould leave theſe Branches, ſhould be proportion'd to the Strength of the Tree, which, in a healthy ſtrong Tree, may be left ten Inches or more; but in a weak one, they ſhould not be more than ſix Inches: however, in this you muſt be guided by the Poſition of a leading Bud; for it is better to leave a Shoot three or four Inches longer, or to cut it two or three Inches ſhorter than we would chuſe to do, provided there be one of theſe Buds, it being abſolutely neceſſary, for the future Welfare of the Tree: You ſhould alſo cut out entirely all weak Shoots, tho' they may have many Bloſſom-buds upon them; for theſe have not Strength enough to nouriſh the Fruit, ſo as to give it a kindly Flavour, but they will weaken the other Parts of the Tree.

In nailing the Shoots to the Wall, you muſt be careful to place them at as equal Diſtances as poſſible, that their Leaves, when come out, may have Room to grow, without ſhading the Branches too much; and you ſhould never nail them upright, if it can be prevented; for when they are thus train'd, they are very ſubject to ſhoot from the upper-moſt Eyes, and the lower part of the Shoots will thereby become naked.

There is not any Thing in the Buſineſs of Gardening, which has more exercis'd the Thoughts of the Curious, than how to preſerve their tender Sorts of Fruit from being blighted in the Spring of the Year; and yet there has been little wrote upon this Subject which is worth Notice: Some have propos'd Mattreſſes of Straw or Reeds to be placed before the Fruit-Trees againſt Walls, to prevent their being blaſted: Others have directed the fixing horizontal Shelters in their Walls, to prevent the perpendicular Dew or Rain from falling upon the Bloſſoms of the Fruit-Trees, which they ſuppos'd to be the chief Cauſe of their Blighting: But both theſe Contrivances have been far from anſwering the Expectations of thoſe Perſons who have put them in Practice (as I have elſewhere ſhewn;)

therefore it may not be improper to repeat ſome Things in this Place, which I have before mention'd, in relation to this Matter. And,

1ſt, I have already ſaid, That the Blights, which are ſo often complain'd of, do not proceed from any external Cauſe or Inclemency in the Seaſon, ſo often, as from a Diſtemper or Weakneſs in the Trees: For if we obſerve the Trees at that Seaſon, where they are the moſt ſubject to what is call'd a Blight, we ſhall find the Branches very ſmall, weak, and not half ripen'd, as alſo train'd in very cloſe to each other; theſe Branches are, for the moſt part, full of Bloſſom-buds (which is chiefly occaſion'd by their want of Strength.) Theſe Buds do indeed open, and, to Perſons not skill'd in Fruit-Trees, ſhew a great Proſpect of a plentiful Crop of Fruit; whereas the whole Strength of the Branches is ſpent in nouriſhing the Flowers, and being unable to do any more, the Bloſſoms fall off, and the ſmall Efforts of the Leaf-buds are check'd, ſo that, many times, the greateſt Part of the Branches die away; and this is call'd a great Blight: whereas at the ſame time it may be often obſerv'd, that ſome Trees of a different Sort, nay, even ſome of the ſame Sort which were ſtronger, tho' placed in the ſame Soil, expos'd to the ſame Aſpect, and ſubject to the ſame Inclemency of Air, have eſcap'd very well, when the weak Trees have appear'd to be almoſt dead; which is a plain Indication that it proceeds from ſome Cauſe within the Tree, and not from any external Blight. All this will therefore be remedy'd, by obſerving the foregoing Directions in the Pruning and Management of the Trees, ſo as never to over-burden them with Branches, nor to ſuffer any Part of the Trees to exhauſt the whole Nouriſhment from the Root, ſo as to cauſe the other Parts to be very weak; but to diſtribute the Nouriſhment equally to every Shoot, ſo that there may be none too vigorous, at the ſame time that others are too weak; and by continually rubbing off uſeleſs or fore-right Shoots, as they are produced, the Strength of the Trees will not be ſpent to nouriſh ſuch Branches as muſt be afterwards cut out, which is too often ſeen in the Management of theſe Trees. And,

2dly, It ſometimes happens, that the Roots of theſe Trees are buried too deep in the Ground, which, in a cold or moiſt Soil, is one of the greateſt Diſadvantages that can attend theſe tender Fruits; for the Sap which is contain'd in the Branches, being by the Warmth of the Sun, put ſtrongly into Motion early in the Spring, is exhauſted in nouriſhing the Bloſſoms, and a Part of it is perſpired through the Wood-branches, ſo that its Strength is loſt before the Warmth can reach to their Roots, to put them into an equal Motion in ſearch of freſh Nouriſhment, to ſupply the Expence of the Branches, for want of which, the Bloſſoms fall off and decay, and the Shoots ſeem to be at a Stand, until the farther Advance of the Warmth penetrates to the Roots, and ſets them in Motions; when ſuddenly after, the Trees, which before look'd weak and decaying, do make prodigious Progreſs in their Shoots; and before the Summer is ſpent, are furniſh'd with much ſtronger Branches, than thoſe Trees which have the full Advantage of Sun and Showers, and that are more fruitful and healthy; which muſt certainly be owing to the former Obſervation; as alſo to their drawing in a great Quantity of crude Moiſture, which, though productive of Wood, is yet unkindly for Fruit. If, therefore, this be the Caſe, there is no Way of helping this, but by raiſing up the Trees, if they are young; or, if they are too old to remove, it is the better Way to root them out, and make new Borders of freſh Earth, and plant down young Trees; for it is a great Vexation to be at the Trouble and Expence of pruning and managing theſe Trees, without having the Pleaſure of reaping any Advantage from them. Which will always be the Caſe, where the Trees are thus injudiciouſly planted. Or,

3dly, This may proceed from the Trees wanting Nouriſhment, which is many times the Caſe, where they are planted in a hard, gravelly Soil, in which it is the common Practice to dig Borders three or four Feet wide, and three Feet deep into the Rock of Gravel; which is fill'd with good freſh Earth, into which the Trees are planted, where they will thrive pretty well for two Years, until their Roots reach the Gravel, where they are confin'd, as if planted in a Pot, and for want of proper Nouriſhment, the Branches do continually decay every Year. This cannot be help'd, where the Trees have been growing ſome Years, without taking them entirely up, or by digging away the Gravel from their Roots, and adding a large Quantity of freſh Earth, that may afford them a Supply of Nouriſhment. But where a Perſon intends to plant Fruit-Trees upon ſuch a Soil, I would adviſe him never to dig into the Gravel, but, on the contrary, to raiſe the Borders, at leaſt two Feet above it, with good freſh Earth, which, if made of a conſiderable Width, ſo that their Roots may have Room to extend themſelves upon the Gravel, they will enjoy the kindly Influences of the Sun and Showers, and produce delicate, well-flavour'd Fruit in plenty.

But if the Unfruitfulneſs of the Trees do not proceed from any of the before-mention'd Cauſes, and is the Effect of unkindly Seaſons: then the beſt Method yet known, is, in froſty dry Weather, when little Dew falls, to ſprinkle the Branches of the Trees gently with Water in the Bloſſoming-ſeaſon; and while the young-ſet Fruit is tender (which ſhould always be done before Noon, that the Moiſture may evaporate before the Night comes on;) and if in the Night you carefully cover the Trees with Mats, Canvas, or ſome ſuch light Covering, it will be of great Service to them: However, where the Trees are ſtrong and vigorous, they are not ſo liable to ſuffer by a ſmall Inclemency, as are thoſe which are weak; ſo that there will be few Seaſons in which there may not be Hopes of a moderate Quantity from them, tho' there ſhould be no Covering uſed.

When your Fruit is ſet, and grown to the Bigneſs of a Small-Nut, you ſhould go over the Trees, and thin them, leaving 'em at leaſt five or ſix Inches aſunder; for when they are permitted to remain in Bunches, as they are often produced, the Nouriſhment which ſhould be employ'd wholly to the Fruits deſign'd to ſtand, will be equally ſpent amongſt the whole Number, a great Part of which muſt be afterwards pull'd off; ſo that the ſooner this is done, the better it will be for the remaining Fruit: And if it ſhould ſometimes happen, that a Part of thoſe left, by any Accident ſhould be deſtroy'd, yet the remaining ones will be much the larger and better-taſted for it, and the Trees will gain more Strength; for a moderate Quantity of Fruit is always preferable to a great Crop; the Fruit, when but few, will be much larger, better-taſted, and the Trees in a Condition to bear well the ſucceeding Years: whereas when they are over-charg'd with Fruit, it is always ſmall, ill-taſted, and the Trees are generally ſo much weaken'd thereby, as not to be in a Condition for bearing well for three or four Years after. So that, upon the Whole, it is much better to have a leſſer Number of Fruit, than is commonly eſtem'd a Crop, than to have too many, ſince the Fruit, and alſo the Trees, are benefitted thereby.

The farther Management of *Peach-trees* in Summer I have already mention'd, and ſhall only add a Word or two more upon that Head in this Place:

1ſt, That the Shoots being regularly train'd to the Wall as they are produc'd, the Fruit will always be equally expos'd to the Sun and Air, by which it will be kept in a conſtant and equal State of Growing; whereas when they are over-ſhadow'd by luxuriant Branches for ſome Time, and afterwards expos'd to the Sun, by cutting off thoſe Branches, their Skins will grow tough, and the Fruit be greatly retarded in its Growth.

2dly, By rubbing off and diſplacing irregular Shoots as they are produced, there will be no need to uſe a Knife to theſe Trees in Summer, which is what they are often greatly injured by; for when there are large Wounds made on theſe Trees, eſpecially in Summer, it weakens them very much. Beſides (as I before ſaid) by doing this early, the Sap of the Trees is not employ'd to nouriſh uſeleſs Branches.

3dly, I would adviſe, Never to ſhorten any of the Branches in Summer, unleſs it be to procure ſome Side-ſhoots to fill up a Vacancy of the Wall; and this ſhould never be done after *May*, becauſe the Shoots produced after that Time are never duly ripen'd, and ſo are no better than autumnal Branches.

When theſe Rules are duly executed, there will be no Occaſion to pull off the Leaves of the Trees, to admit the Sun to the Fruit, which is too often practis'd; for if we conſider, that the Leaves are abſolutely neceſſary to cheriſh the Bloſſom-buds, which are always form'd at the Foot-ſtalks of the Leaves; ſo, pulling them off before they have perform'd the Office aſſign'd 'em by Nature, is doing great Injury to the Trees: therefore I caution every one againſt that Practice.

PERSICARIA; Arſmart.

The *Characters* are;

It is a Plant with an apetalous Flower, having ſeveral Stamina (or Chives) which ariſe from the multifid Calyx: The Pointal afterwards becomes an oval pointed, ſmooth Seed, incloſ'd in the Capſule which was before the Flower-cup: To which may be added, It hath jointed Stalks, and the Flowers are produced in Spikes.

The *Species* are;

1. Persicaria; *mitis, maculoſa. C. B. P.* Dead, *or* Spotted Arſmart.

2. Persicaria; *vulgaris, acris, ſeu Hydro-piper. J. B.* Water-pepper, Lake-weed, *or* Arſmart.

3. Persicaria; *major, lapathi foliis, calice floris purpureo. Tourn.* Greater Arſmart, with Dock-leaves, and a purple Flower-cup.

4. Persicaria; *Orientalis, Nicotianæ folio, calice florum purpureo. T. Cor.* Eaſtern Arſmart, with a Tobacco-leaf, and a purple Flower-cup.

There are ſeveral other *Species* of this Plant, which grow wild upon moiſt Soils and Dunghills in divers Parts of *England:* But as they are rarely cultivated in Gardens, and being Plants of no Uſe at preſent, ſo I omit enumerating of them in this Place.

The two firſt Sorts here mention'd are ſometimes uſed in Medicine; the latter of which is a very ſharp acrid Plant, from whence it had its Name of *Water-pepper* and *Arſmart:* This is a perennial Plant, which grows in great Plenty on the Sides of Ditches, and in moiſt Places, almoſt in every Part of *England,* and is a very bad Weed, if once it gets Poſſeſſion in a Garden; for the Roots extend themſelves greatly under-ground, and ariſe from every Joint (as doth *Couch-graſs*) ſo that it is with great Difficulty extirpated.

The firſt is an annual Plant, that propagates itſelf in great Plenty from Seeds, which falling upon the Ground, riſe in the ſucceeding *Spring,* and ſpread over the Ground, where-ever they are permitted to grow; ſo that they ſhould not be ſuffer'd to remain in Gardens: Theſe are both gathered in the Fields in *Autumn* for Medicinal Uſe, when they are in Perfection.

The third Sort is cultivated in ſome curious Gardens for Variety, it making a handſome Appearance during the Seaſon of its Flowering: This may be propagated by ſowing the Seeds upon a Bed of rich moiſt Earth in *Autumn,* ſoon after they are ripe, and the Plants will come up the Spring following, when they may be tranſplanted into the Borders where they are to remain: This is alſo an annual Plant, which requires to be ſown every Year, or the Seeds permitted to ſhed, which will grow better than thoſe which are ſown by Art.

The fourth Sort was brought from the Eaſtern Country by Monſ. *Tournefort,* to the *Royal Garden* at *Paris,* from whence it hath been ſince communicated to ſeveral Parts of *Europe.* This Plant (though but an Annual) doth grow to be ten or twelve Feet high, and divides into ſeveral Branches, each of which produces a beautiful Spike of purple Flowers at their Extremities in the *Autumn*; which together with its large green Leaves, and jointed Stalks, do make a very grand Figure in the Borders of large Gardens, late in the Seaſon, when few other Plants are in Beauty.

The Seeds thereof ſhould be ſown in *Autumn* as ſoon as they are ripe; or if they are permitted to fall on the Ground, the Plants will come up the *Spring* following better than when they are ſown by Art, (as was before obſerved); for if the Seeds are ſown in the *Spring,* it is very rare that any of them ſucceed; and if ſome few Plants do come up from thoſe Seeds ſown at that Seaſon, they ſeldom grow near ſo ſtrong as thoſe which are produced from the Seeds which fell in *Autumn*; ſo that there is no other Culture required to this Plant, but to tranſplant them out in the *Spring* where they are deſign'd to ſtand, which ſhould be in large Gardens, giving them great Space; for if they are placed near other Plants, they will ſhade them entirely from the Sun, and by continual dripping upon them, will greatly injure them; and if they ſtand too cloſe, their Beauty is greatly diminiſhed.

When the Plants begin to aſpire upwards, (which is commonly in *July*) their Side-ſhoots ſhould be pruned off, to make them advance in Height, and preſerve them within Compaſs; otherwiſe they are very ſubject to branch out widely on every Side, ſo as to become troubleſome in a Garden; but when they are pruned up regularly five or ſix Feet high, they may afterwards be permitted to ſhoot out Side-branches; ſince thoſe which are produced above that Height, will never be very long or troubleſome, but will add to the Beauty of the Plant: This delights in a rich moiſt Soil, upon which it will grow to a prodigious Height; it produces its Flowers in *September*, which continue in Beauty till the Froſt deſtroys 'em.

PERVINCA; Periwinkle.

The *Characters* are;

The Flower-cup conſiſts of one Leaf, which is divided into five long, narrow Segments: The Flower alſo conſiſts of one Leaf, which expands in the Form of a Salver, and is cut into five broad Segments: The Pointal, which ariſes from the Centre of the Flower-cup, becomos a Fruit compos'd of two Husks (or Pods) which contain oblong, cylindrical, furrow'd Seeds: To which may be added, That this Plant ſhoots out many long creeping Branches, which ſtrike out Roots at their Joints,

The *Species* are;

1. Pervinca; *vulgaris, anguſtifolia, flore cæruleo. Tourn.* Common *or* Narrow-leav'd *Periwinkle*, with a blue Flower.

2. Pervinca; *vulgaris, anguſtifolia, flore albo. Tourn.* Common *Periwinkle*, with a white Flower,

3. Pervinca; *vulgaris, latifolia, flore cæruleo. Tourn.* Greater *Periwinkle* with a blue Flower.

4. Pervinca; *vulgaris, anguſtifolia, flore rubente. Tourn.* Common *Periwinkle* with a reddiſh Flower.

5. Pervinca; *vulgaris, anguſtifolia, flore pleno, ſaturatè purpureo. Tourn.* Common *Periwinkle*, with a double Flower, of a deep purple Colour.

6. Pervinca; *anguſtifolia, vulgaris, variegata, ex aureo & viridi. Boerh. Ind.* Common *Periwinkle*, with yellow-ſtrip'd Leaves.

7. Pervinca; *anguſtifolia, vulgaris, variegata ex argenteo & viridi. Boerh. Ind.* Common *Periwinkle*, with ſilver-ſtrip'd Leaves.

The firſt Sort grows wild in divers Parts of *England*, and is not ſo much cultivated in Gardens at preſent, as it was formerly, when it was planted for edging of Borders; but the Shoots being very apt to root at their Joints, render'd it very difficult to preſerve in any tolerable Order; and the Plants rooting deep in the Ground, do greatly exhauſt the Goodneſs of the Soil, ſo that it is now almoſt wholly caſt out of Gardens.

The ſecond and fourth Sorts are Varieties from the firſt, differing only in the Colour of their Flowers; as are alſo the ſixth and ſeventh, which differ in their variegated Leaves, for which they are preſerved in the Gardens of thoſe who admire ſtrip'd Plants.

The fifth Sort produces fine double Flowers, which makes a very handſome Appearance during its Seaſon of Flowering, which renders it worthy of a Place in every good Garden.

The third Sort grows much larger than the former, and produces large blue Flowers: This is found in Woods and ſhady Places in divers Parts of *England*.

All theſe Plants multiply exceedingly by their Shoots from the old Roots, which trailing upon the Ground, do ſtrike out Roots in a ſhort time and may be taken off and tranſplanted where they are to remain: And tho' they are not ſo proper for a Flower-garden, yet a few Roots of each Sort may be planted in ſhady Borders under Trees, where few other Plants will thrive, or in ſmall Wilderneſſes; in which Places, if they are kept within Compaſs, they make a pretty Variety. The large Sort may be planted under Hedges, in Woods, *&c.* where it will grow four or five Feet high, and continue a long Time in Flower.

Theſe Plants propagate themſelves by Roots ſo plentifully, that they ſeldom produce Fruit.

Monſ. *Tournefort* ſays, He could never obſerve any Fruit upon them either in the Country adjoining to *Paris*, or in *Provence* or *Languedoc*, where they are very common, or in the Neighbourhood of *Liſbon*.

Of all the Botanical Writers before *Tournefort*, *Cæſalpinus* is the only Perſon who found and deſcrib'd this Fruit, which, he ſays, is oblong, being two forked Husks, arched and conjoin'd at their Extremities, containing, for the moſt part, two oblong Seeds in each.

To have this Plant produce Fruit, Monſ. *Tournefort* adviſes its being planted in a Pot that contains but a ſmall Quantity of Earth; ſo that the Sap being prevented from diſſipating and ſpending itſelf upon nouriſhing new Shoots, will mount the Stems, and ſwell the Pointal, which becomes the Fruit; and this, he ſays, was the Method whereby he obtain'd the Fruit of this Plant, of which he has given a Figure in his *Elements of Botany*.

But notwithſtanding what Monſ. *Tournefort* has related concerning this Matter, I have often obſerv'd the Fruit upon ſuch Plants as have grown ſingly on a good Soil; tho' where their Shoots are permitted to entangle with each other, and grow very cloſe, there is ſeldom any Fruit produced.

PETASITES; Butter-bur.

The *Characters* are;

It is a Plant with a floſculous Flower, conſiſting of many Florets, divided into many Parts: ſitting on the Embryo, and contain'd in a Cylindrical Empalement, divided alſo into many Parts: The Embryo afterwards becomes a Seed furniſh'd with Down: To which may be added, The Flowers appear before the Leaves.

The *Species* are;

1. PETASITES; *major, & vulgaris. C. B. P.* Common Butter-bur, *or* Peſtilent-wort.

2. PETASITES; *major, floribus pediculis longis inſidentibus. Raii Syn.* Greater Butter-bur, with long Footſtalks to the Flowers.

3. PETASITES; *albus, anguloſo folio. J. B.* White Butter-bur, with angular Leaves.

4. PETASITES; *minor, alter, tuſſilaginis folio. H. R. Par.* Leſſer Butter-bur, with a Colt's-foot Leaf.

The firſt Sort here mentioned is uſed in Medicine: This grows wild in great Plenty by the Sides of Ditches, and in moiſt Soils in divers Parts of *England*. The Flowers of this Plant appear in the Beginning of *March*; and after they are paſt, the green Leaves come up, and grow to be very large.

The ſecond Sort was found by Mr. *Jacob Bobart* in *Oxfordſhire*, and ſent to the *Phyſick-Garden* at *Chelſea*: This differs greatly from the former in its manner of Flowering; for the Flower-ſtems of this Sort riſe near two Feet high, and the Flowers grow upon long Foot ſtalks; whereas the Stems of the common Sort do ſeldom riſe above eight or ten Inches high, and the Flowers do cloſely ſurround the Stalks.

The other two Sorts are preſerv'd in Botanick Gardens for Variety; but as they have little Beauty, ſo they are ſeldom propagated in other Gardens: They do all of them increaſe greatly by their creeping Roots, and, if plac'd in a moiſt Soil, will in a ſhort time over-run a large Compaſs of Ground.

PETROSELINUM; *vide* Apium.

PEUCEDANUM; Hogs-fennel.

The *Characters* are;

It is a Plant with a Roſe and umbellated Flower, conſiſting of many Petals placed orbicularly, and reſting on the Empalement, which becomes a Fruit compos'd of two Seeds, which are almoſt plain, oval, gently ſtreak'd, and border'd: To theſe Marks muſt be added, That the Leaves are winged, narrow, graſſy, and divided into three Segments.

The *Species* are;

1. PEUCEDANUM; *majus, Italicum. C. B. P.* Greater Hogs-fennel.

2. PEUCEDANUM; *minus, Germanicum. J. B.* Leſſer, *German* Hogs-fennel, *or* Sulphur-wort.

There are ſeveral other *Species* of this Plant, which are preſerved in ſome curious Botanick Gardens: But as they are Plants of little Beauty or Uſe, ſo it would be needleſs to enumerate their ſeveral Varieties in this Place.

The firſt Sort here mention'd is not very common in *England*, being only to be found in ſome curious Gardens: But the ſecond Sort (which is directed to be uſed in Medicine) is found wild in watery Places in ſeveral Parts of *England*.

Theſe Plants may be cultivated by ſowing their Seeds on a moiſt Soil in the *Autumn* ſoon after they are ripe, in which Place they will come ſtrong the ſucceeding *Spring*, when they ſhould be carefully weeded, and drawn out where they are too cloſe, otherwiſe they will draw each other up very weak; and the *Autumn* following they may be taken up, and tranſplanted where they are to remain, in which Place they ſhould be planted at leaſt two Feet aſunder; for their Roots will grow very large, and branch out greatly, when they have acquir'd Strength. The ſecond Year after ſowing, they will produce Flowers and Seeds, but the Roots will abide many Years.

PHALANGIUM; Spider-wort.

The *Characters* are;

It is a Plant with a Lily-Flower, *compos'd of ſix Petals, from whoſe Centre riſes the Pointal, which afterwards becomes a roundiſh Fruit, divided into three Cells, and full of angular Seeds: To theſe Marks muſt be added a fibroſe Root, in order to diſtinguiſh it from the* Ornithogalum.

The *Species* are;

1. PHALANGIUM; *parvo flore, ramoſum. C. B. P.* Branched Spider-wort, with a ſmall Flower.

2. PHALANGIUM; *parvo flore, non ramoſum. C. B. P.* Unbranched Spider-wort, with a ſmall Flower.

3. **Phalangium**; *Africanum, floribus luteis, parvis. Raii Hiſt.* African Spider-wort with ſmall yellow Flowers.

4. **Phalangium**; *parvo flore ramoſum, foliis fiſtuloſis, annuum. H. L.* Annual - branching Spider - wort, with fiſtulous Leaves, and a ſmall Flower.

5. **Phalangium**; *Africanum, foliis cepaceis, floribus ſpicatis aureis. Boerh. Ind.* African Spider-wort, with Onion Leaves, and Golden Flowers, growing in Spikes, *falſely call'd an* Aloe.

6. **Phalangium**; *Æthiopicum, ramoſum, floribus albis, petalis reflexis. Hort. Amſt.* Branchy Ethiopian Spider-wort, with white Flowers, whoſe Petals are turn'd backward.

The firſt and ſecond Sorts are abiding Plants, which are propagated in curious Gardens for the ſake of their Flowers; and tho' they are not very beautiful, yet, for their long Continuance in Flower, they deſerve a Place in the open Borders of every curious Flower-Garden.

Theſe may be propagated either from Seeds, or by parting their Roots: The beſt Time to ſow the Seeds is in *Autumn*, ſoon after they are ripe, in the Manner directed for Bulbous-rooted Flowers, with which theſe Plants do agree in their Culture, and the ſecond Year after ſowing, they will produce Flowers. The Seaſon for parting their Roots is in *September*; in doing of which, you muſt obſerve to preſerve a good Head to each Off-ſet, and not to divide them too ſmall, which will cauſe them to flower weak the following *Summer*: They delight in a freſh light Earth, and an open Situation.

The third Sort is an annual Plant, which ſhould be ſown on a Bed of light Earth in *March*; and when the Plants are come up, they muſt be tranſplanted where they are to remain, in which Place they muſt be kept clear from Weeds, which is all the Culture they require. They produce their Flowers in *July*, and their Seeds are perfected in *Auguſt*.

The fourth Sort is alſo annual, but grows very large, in compariſon to the laſt: This commonly riſes two Feet high, and divides into many Branches, each of which produces a Spike of Flowers: It is a very hardy Plant; and if the Seeds are permitted to fall in *Autumn*, they will come up in the *Spring*, and produce much ſtronger Plants, than if ſown at that Seaſon, and will flower much ſooner: This muſt have a light dry Soil.

The fifth Sort is preſerv'd in Green-houſes, with other ſucculent Plants, amongſt which it makes a pretty Variety, there being ſcarcely a Month in the Year when there are not ſome of the Spikes of Flowers in Beauty. This was formerly call'd an *Aloe*, which Name is ſtill retain'd by unskilful Perſons, tho' it is vaſtly different therefrom in its whole Appearance. This Plant multiplies very faſt by Off-ſets, which, tho' produced at ſome Diſtance from the Earth, yet do emit Roots of a conſiderable Length; and when planted, do immediately take in the Earth: They ſhould be planted in Pots of light ſandy Earth, and houſed in Winter with *Ficoides's*, and other hardy ſucculent Plants, where they may have free open Air; for they are hardy, and require only to be protected from Froſt.

The ſixth Sort is alſo preſerved in ſome curious Gardens, with other Exotick Plants in the Green-houſe: This is multiply'd by parting the Roots; the beſt Seaſon for doing this is in *Auguſt*, when the Leaves are decay'd; they ſhould be planted in Pots fill'd with light ſandy Earth, and houſed in Winter with the laſt: This produces large branching Stems, which are thinly beſet with Flowers, that have their Petals reflex'd, and are of a whitiſh Colour, but continue a long time in Beauty.

PHASEOLOIDES, Kidney-bean Tree; *vulgò*.

The *Characters* are;

It hath a papilionaceous Flower, out of whoſe Empalement riſes the Pointal, which afterwards becomes a long Pod, incloſing ſeveral Seeds, which are ſhap'd almoſt like a Kidney: To which muſt be added, That it hath pennated Leaves, conſiſting of an unequal Number of Lobes, which diſtinguiſhes it from Phaſeolus.

We have but one *Species* of this Plant at preſent in *England*, which is;

PHASEOLOIDES; *Carolinianum, fruteſcens, ſcandens, foliis pinnatis, floribus cæruleis ſpicatis.* Carolina Kidney-bean Tree; *vulgò*.

The Seeds of this Plant were ſent from *Carolina* by Mr. *Catesby*, in the Year 1724, and diſtributed to ſeveral curious Perſons near *London*; from which many Plants have been rais'd, which are very hardy, and propagate very eaſily by laying down the tender Branches, or from Suckers which are ſent from the Root in great Plenty.

The beſt Seaſon for tranſplanting theſe Plants is in the *Spring*, juſt before they ſhoot: They will grow in almoſt any Soil, but thrive beſt in a rich light Earth.

This Plant is very proper to place among other climbing Shrubs in ſmall Wilderneſs Quarters, where if it be ſupported with ſtrong Stakes, it will riſe twelve or fourteen Feet high, and produce many Spikes of fine blue Flowers; and if the Seaſon prove favourable, the Seeds will ripen very well: It is extreme hardy, enduring the ſevereſt Cold of our Climate in the open Air, provided it be not too much expos'd to the cold Winds.

PHASEOLUS; Kidney-bean.

The *Characters* are;

It is a Plant with a papilionaceous Flower, out of whoſe Empalement riſes the Pointal, which afterwards becomes a long Pod, pregnant with Seeds, for the moſt Part ſhaped like a Kidney or Oval: To theſe Notes are to be added, Leaves growing by three's on each Pedicle, and the Plant for the moſt Part climbing.

It would be to little Purpoſe to enumerate all the Varieties of this Plant which have come to Knowledge, in this Place; ſince *America* does annually furniſh us with new Sorts; ſo that there is no knowing what Varieties there may be produced in *England:* Beſides, as they are not likely to be much cultivated here, ſince the old Sorts are preferable to any of the new ones, for the Kitchen; therefore I ſhall only firſt ſet down a few Sorts which are cultivated for their Flowers, or as Curioſities, and then mention thoſe which are moſt eſteem'd for the Table.

1. PHASEOLUS; *Indicus, flore coccineo, ſeu puniceo. Mor. Hiſt.* The Scarlet-bean.

2. PHASEOLUS; *Americanus, perennis, flore cochleato odorato, ſeminibus fuſcis orbiculatis, Caracalla dictus. H. L.* Perennial American Kidney-bean, with ſweet-ſmelling cochleated Flowers, *commonly call'd* Caracalla.

3. Phaseolus; *Americanus, ſtrumoſa radice, flore purpureo, ſiliquâ anguſtiſſimâ. Plum.* American Kidney-bean, with a ſtrumoſe Root, a purple Flower, and a very narrow Pod.

4. Phaseolus; *Canadenſis, purpureus, minor, radice vivaci. Schol. Bot.* Small purple Kidney-bean, with a perennial Root.

5. Phaseolus; *arbor, Indica incana, ſiliquis toroſis, Kayan dicta. Raii Hiſt.* Indian Hoary-tree Kidney-bean, with ſwelling knotted Pods, *commonly call'd* Pigeon-Pea.

The firſt of theſe Plants is very common in the *Engliſh* Gardens, being planted for the Beauty of its ſcarlet Flowers. This Plant ſpreads itſelf very far, ſo that it ſhould be allow'd Room, otherwiſe it will over-run whatever Plants grow near it. The Seaſon for planting the Seeds of this Plant is in the Beginning of *April*, obſerving always to do it in dry Weather, otherwiſe the Seeds will burſt and rot. They will produce their Flowers by the Beginning of *July*, and will continue flowering until the Froſt prevents them; and their Seeds will ripen in *September*, when they ſhould be gathered, and preſerv'd in a dry Place until the ſucceeding *Spring*, in order to be ſown. This Plant being annual, periſhes with the firſt Approach of *Winter:* It will thrive very well in the City, the Smoak of the Sea-coal being leſs injurious to this Plant than moſt others, ſo that it is often cultivated in Balconies, *&c.* and being ſupported either with Sticks or Strings, grows up to a good Height, and produces its Flowers very well: It is alſo planted in ſome Gardens to cover Arbors and other Seats in the *Summer*-ſeaſon, to afford Shade, for which Purpoſe it will do very well: But the Seeds muſt be put in where they are to remain; for the Plants don't bear to be tranſplanted well.

The ſecond Sort is an abiding Plant, which may alſo be propagated by Seeds, which ſhould be ſown in a moderate Hot-bed in the *Spring*; and when they come up, they muſt be carefully tranſplanted into Pots, fill'd with light freſh Earth, which muſt be plunged into a Hot-bed to facilitate their taking Root; after which they ſhould be inured to bear the open Air by Degrees, into which they ſhould be remov'd when the Seaſon is warm, placing them in a ſhelter'd Situation; and as they advance, ſo ſhould they be remov'd into larger Pots, which muſt be fill'd up with freſh light Earth.

During the *Summer*-ſeaſon, it muſt be frequently refreſh'd with Water; but in the Winter it muſt be remov'd into the Green-houſe, and ſhould have but little Water during that Seaſon. It requires only to be ſcreen'd from Froſt, but muſt have open free Air whenever the Weather will permit, otherwiſe the Leaves will grow mouldy, and decay the tender Shoots: It produces its ſcarlet Flowers in *July* and *Auguſt*, but ſeldom perfects its Seeds in this Country. This Plant is very common in *Portugal*, where it is planted to cover Arbours and Seats in Gardens, for which it is greatly eſteem'd by the Inhabitants of that Country, and for its beautiful ſweet-ſmelling Flowers; and in that Country it thrives very well in the open Air.

The third Sort is preſerv'd in ſome curious Gardens for Variety; but is a Plant of no great Beauty: This may be propagated by ſowing the Seeds in the *Spring* upon a Hot-bed; and when they come up, they muſt be planted in Pots, and treated as the former Sort: It produces its Flowers in *July*, and the Seeds ripen in *September*.

The fourth Sort was brought from *America*, and is preſerv'd in curious Gardens, for the ſake of its long Flowering: This is an abiding Plant, and ſhould be managed as was directed for the third Sort; and if guarded from Froſt, will continue to produce Flowers all the *Winter*-ſeaſon. It ripens Seeds very well, from which the Plants may be eaſily propagated.

The fifth Sort is preſerv'd as a Curioſity in *England*: But in the *Weſt-Indies* it is frequently planted by the Sides of Alleys in Gardens, to form a Hedge, where they will laſt many Years without decaying; and will thrive on barren Land, which has been worn out, where ſcarcely any thing elſe will proſper; and produce a great Quantity of Fruit, which are ſometimes eaten by the Inhabitants; but their chief Uſe is to feed Pigeons, from whence this Plant had its Name. The Branches, with the ripe Peaſe and Leaves, are given to Hogs, Horſes, and moſt other Cattle, which fattens them very much. In *England* it is preſerv'd in Stoves, being too tender to be kept without artificial Heat in this Climate: It may be propagated from Seeds, (which are generally brought from the *Weſt-Indies* every Year in great Plenty); and when the Plants come up, they ſhould be planted into Pots fill'd with light ſandy Earth, and plung'd into a Hot-bed, to promote their Growth: But when they have acquir'd Strength, they ſhould be gradually inur'd to the open Air, into which they may be removed in *July*, and may remain abroad until the Beginning of *September*, when they muſt be remov'd into the Stove, placing them where they may have a moderate Heat, obſerving to refreſh them now and then with a little Water; but be very careful not to give it to them in great Quantities, (eſpecially at that Seaſon) which will be very apt to rot their Roots: The ſecond Year theſe Plants will flower early in the *Spring*, and do many times produce ripe Fruit.

There are at preſent but three Sorts of *Kidney-beans*, which are cultivated for the Table in *England*, which are:

1. The Common White, *or* Dutch Kidney-bean.
2. The Leſſer Garden Kidney-bean, *commonly call'd* the Batterſea Bean.
3. The Upright, *or* Tree Kidney-bean.

The firſt of theſe was formerly more cultivated in *England* than at preſent; but is the chief Sort now cultivated in *Holland*, from whence probably it had the Name of *Dutch Kidney-bean*: This Sort riſes to a very great Height, and requires to be ſupported by tall Stakes, otherwiſe they will ſpread upon the Ground and rot; ſo that where this Care is wanting, the Fruit ſeldom comes to good; which Trouble renders it difficult to cultivate this Sort in Plenty; and the Beans being much broader than the ſmall Sort, render them leſs valuable in the *London* Markets; which, I ſuppoſe, occaſion'd their being neglected in *England*.

The ſecond Sort is that which is moſt commonly cultivated in the Gardens near *London*, and is by far the beſt Sort we yet know; for the Plant never rambles too far,

but

lways of moderate Growth,
the Air can eaſily paſs be-
the Rows, and keep them
tting: It is alſo a plentiful
and the beſt Bean of all the
eating.

third Sort is alſo a plentiful
and never rambles, grow-
ight in form of a Shrub;
Beans are much larger than
, and are not ſo well co-
nor do they eat near ſo firm
p; for which Reaſons they
ſo generally eſteem'd.

e Plants are propagated from
which muſt be ſown in the
here they are to remain; for
ll not bear tranſplanting, ex-
be done while they are very
and this being pretty trou-
e, is very ſeldom practiſed,
or a few early Plants under
Hedges or Walls; but it is
rth while for the general

Seaſon for putting theſe
Ground, is the latter End of
or, the Beginning of *April*,
early Crop; but theſe ſhould
warm Situation, and a dry
herwiſe they will not ſuc-
you ſhould alſo obſerve to
m into the Ground at a dry
for Wet ſo early in the
will rot the Seeds in the
. The manner of plant-
m, is, to draw ſhallow Fur-
with a Hoe, at about two
d an half Diſtance from each
nto which you ſhould drop
ds about two Inches aſun-
hen with the Head of a
raw the Earth over them,
cover them about an Inch

e Seaſon be favourable, the
will begin to appear in about
's time after ſowing, and
fter will raiſe their Heads
upright; therefore if the Stems thereof are pretty tall above-ground, you ſhould gently draw a little Earth up to them, obſerving to do it when the Ground is dry, which will preſerve them from being injured by ſharp Winds; but you ſhould be careful not to draw any of the Earth over their Leaves, which would rot them, or at leaſt greatly retard their Growth. After this they will require no farther Care but to keep them clear from Weeds until they produce Fruit, when they ſhould be carefully gather'd two or three times a Week; for if they are permitted to remain upon the Plants a little too long, the Beans would be too large for eating, and the Plants would be greatly weaken'd thereby.

This firſt Crop of *Kidney-beans* will continue a Month in good Order, during which time they will produce great Plenty of Beans; therefore, in order to have a Succeſſion of them throughout the Seaſon, you ſhould ſow at three different Times, *viz.* in *March* or *April*, in *May*, and toward the latter-end of *June*; which laſt Crop will continue until the Froſt comes on, and deſtroys 'em.

There are ſome Perſons who raiſe theſe in Hot-beds, in order to have them very early: The only Care to be taken in the Management of theſe Plants, when thus rais'd, is to allow them Room, and give them as much Air as can be conveniently, when the Weather is mild; as alſo to let them have but a moderate Heat; for if the Bed be over-hot, they will either burn, or be drawn up ſo weak as never to come to good.

The Manner of making the Hot-bed being the ſame as for *Cucumbers*, &c. need not be repeated in this Place; but only obſerve, when the Dung is equally levell'd, to lay the Earth about four or five Inches thick; and let the great Steam of the Bed paſs off before you ſow the Seeds: The Time for doing this, muſt be proportion'd to the Seaſon when you would have the Beans for the Table; but the ſureſt Time for a Crop is about a Week in *February*.

It is alſo a good Method which ſome uſe, to have *French Beans* earlier than they can be obtain'd in the common Ground, To make a gentle Hot-bed about the Middle of *March*, which may be arched over with Hoops, and covered with Mats, in this they ſow their *Kidney-beans* in Rows pretty cloſe together, ſo that a ſmall Bed will contain a great Number of Plants, theſe they bring up hardily, inuring 'em to the open Air by Degrees; and in the Beginning of *April*, when the Weather is ſettled, they prepare ſome warm Borders under Walls or Hedges; then they take them up from the Hot-bed, preſerving as much Earth as poſſible to their Roots, and plant them in the Borders at the Diſtance they are to remain: Theſe, if they take Root kindly, will produce Beans at leaſt a Fortnight before thoſe ſown in the common Ground.

The Manner of ſaving the Seeds of theſe Plants, is to let a few Rows of them remain ungather'd in the Height of the Seaſon; for if you gather from the Plants for ſome time, and afterwards leave the Remaining for Seed, their Pods will not be near ſo long and handſome, nor will the Seed be ſo good: In the *Autumn*, when you find they are ripe, you ſhould in a dry Seaſon pull up the Plants, and ſpread them abroad to dry; after which, you may threſh; out the Seed, and preſerve it in a dry Place for Uſe.

PHILLYREA; Mock-Privet.

The *Characters* are;

The Leaves grow by Pairs oppoſite to each other, and are Ever-green: The Flower conſiſts of one Leaf, is Bell-ſhap'd, and divided into four Parts at the Top: The Pointal, which riſes from the Centre of the Flower-cup, afterwards becomes a ſpherical Flower containing one round Seed.

The *Species* are;

1. PHILLYREA; *latifolia levis. C. B. P.* The Broad-leav'd true *Phyllyrea.*

2. PHILLYREA; *latifolia, ſpinoſa. C. B. P.* Ilex-leaf'd *Phillyrea. vulgô.*

3. PHILLYREA; *folio Alaterni. J. B. Phillyrea,* with an Alaternus Leaf.

4. PHYLLYREA; *folio liguſtri. C. B. P.* Privet-leaf'd *Phillyrea.*

5. PHILLYREA; *anguſtifolia, prima. C. B. P.* Narrow-leaf'd *Phillyrea.*

6. PHILLYREA; *anguſtifolia, ſecunda. C. B. P.* Roſemary-leaf'd *Phillyrea*; vulgô.

7. PHILLYREA; *Olea Epheſiaca, folio. Hort. Chelſ. Pluk. Phyt.* Olive-leaf'd *Phillyrea.*

8. PHILLYREA; *latifolia levis, foliis ex luteo variegatis. Cat. Plant. Hort.* The true *Phillyrea,* with ſtrip'd Leaves.

Theſe Plants are moſt of them Natives of the Southern Parts of *France, Spain,* and *Italy,* but are hardy enough to endure the Cold of our Climate in the open Air: They have been formerly in great Requeſt for Hedges, and to cover Walls; for both which Purpoſes they are very improper; becauſe they ſhoot ſo faſt in the *Spring* and *Summer* Months, that it is very troubleſome to keep ſuch Hedges in Order: Beſides, all theſe Sorts with broad Leaves do naturally produce their Branches ſo far aſunder, that they can never be reduc'd to a thick handſome Hedge; for altho' by frequently clipping the extreme Parts of the Shoots you force out ſome Side-branches, which render it thick on the Outſide, yet the inner Branches are very far aſunder, and being of a pliable Nature, are often diſplac'd by ſtrong Winds; or if there happen to fall much Snow in *Winter*, ſo as to lie upon theſe Hedges, it often diſplaces them ſo much as not to be recover'd again in ſome Years; for which Reaſons they are not ſo much in uſe for Hedges as they were ſome Years paſt: nor are they ſo often planted to cover Walls; for it is a very difficult Task to keep them cloſe to the Wall; for their Branches being vigorous, do commonly grow to ſome Diſtance from the Wall, and harbour all ſorts of Inſects and Filth: beſides, their Leaves being large, and growing pretty far aſunder upon the Branches, they appear naked, eſpecially when they are kept cloſely clipt.

But all theſe Sorts of Trees are very proper to intermix with other Ever-greens, to form Clumps, Amphitheatres, or to plant round the Sides of Wilderneſſes of Ever-green Trees, where being placed among other Trees of the ſame Growth, they will afford a pleaſing Variety.

The three firſt Sorts will grow to the Height of twenty Feet, or more, and may be train'd up to regular Heads: but the narrow-leaf'd Sorts ſeldom riſe above fourteen or ſixteen Feet high with us; ſo that they will be of a proper Size to place in a Line before the Broad-leaf'd Sorts, where being intermix'd with *Hollies*, *Alaternus's*, *Arbutus's*, and ſome other Sorts, they will make a beautiful Proſpect.

Theſe Plants are propagated either from Seeds or Layers; but the latter being the moſt expeditious Method in *England*, is chiefly preferr'd: The beſt time to lay them down is in *March*, when you ſhould dig the Ground round the Plants intended to lay, making it very looſe; then making choice of a ſmooth Part of the Shoot, you ſhould make a Slit upwards (in the manner as is practis'd in laying of *Carnations*;) and then bend the Branch gently down to the Ground, making a hollow Place with your Hand to receive it, and having placed the Part which was ſlit in the Ground, ſo as that the Slit may be open, you ſhould faſten it down with a forked Stick, that it may remain ſteady, covering that Part of the Branch with Earth about three Inches thick, obſerving to keep the upper-part erect. In dry Weather theſe Layers ſhould be water'd, which will greatly facilitate their Rooting; you muſt alſo keep 'em clear from Weeds, which if ſuffer'd to grow up amongſt them, will prevent their taking Root.

The *March* following many of theſe Plants will be rooted, at which time they may be taken off, and carefully planted in a Nurſery, where they may be train'd up three or four Years in the manner you intend them to grow; during which time you ſhould dig the Ground between the Rows, and cut about the Roots of the Plants every Year, which will cauſe 'em to ſtrike out ſtrong Fibres, ſo as to ſupport a good Ball of Earth when they are remov'd; you ſhould alſo ſupport their Stems with Stakes, in order to make them ſtrait, otherwiſe they are very apt to grow crooked and unſightly.

When the Plants have been thus manag'd three or four Years, you may tranſplant them into the Places where they are deſign'd to remain: The beſt time for this Work is the latter-end of *March*, or the Beginning of *April*, juſt before the Plants begin to ſhoot: but in removing them, you ſhould dig round their Roots, and cut off all downright or ſtrong Roots which have ſhot out to a great Diſtance, that you may the better preſerve a Ball of Earth to each Plant, otherwiſe they are ſubject to miſcarry: And when you have plac'd them in their new Quarters, you ſhould lay ſome Mulch upon the Surface of the Ground, to prevent its drying; and give them ſome Water twice a Week in very dry Weather: but do not repeat it too often, nor give it to them in too great Quantities, which will rot the new Fibres, and prevent their Growth. You ſhould alſo ſupport the Plants with Stakes until they have taken faſt hold of the Earth, to prevent their being turn'd out of the Ground, or diſplac'd by the Winds, which will deſtroy the Fibres that were newly put out, and greatly injure the Plants. Theſe Trees delight in a middling Soil, which is neither too wet and ſtiff, nor too dry; tho' the latter is to be preferr'd to the former, provided it be freſh.

The Sort with ſtrip'd Leaves is at preſent pretty rare, and ſomewhat tenderer than the others (as are moſt Sorts of variegated Plants leſs capable to endure the Cold, than thoſe of the ſame kinds which are plain; the ſtriping of Plants always proceeding from their Weakneſs:) This is preſerv'd in ſome Gardens as a Curioſity; but may be propagated in the ſame manner with the former.

Thoſe Sorts with ſmall Leaves, are commonly two Years before they take Root when lay'd, therefore they ſhould not be diſturb'd ſooner; for the raiſing them out of the Ground does greatly retard their Rooting.

PHLOMIS; The Sage-Tree, or Jeruſalem-Sage.

The *Characters* are;

It hath a labiated Flower conſiſting of one Leaf, whoſe Upper-lip (or Helmet) which is creſted, does wholly reſt upon the Under-lip (or Beard) which is divided into three Parts, and extends a little beyond the Upper-lip: The Pointal riſes out of the Flower-cup, accompany'd with four Embryo's, which afterwards become ſo many oblong Seeds, ſhut up in a Husk, or a pentagonal Tube, which was before the Flower-Cup.

The *Species* are;

1. PHLOMIS; *fruticoſa, ſalviæ folio, latiore & rotundiore. Tourn.* Broad-leav'd Sage-Tree; *vulgò.*

2. PHLOMIS; *fruticoſa, ſalviæ folio, longiore & anguſtiore. Tourn.* Narrow-leav'd Sage-Tree; *vulgò.*

3. PHLOMIS; *fruticoſa, humilis, latifolia, candidiſſima, floribus luteis. Act. Phil.* Low Shrubby Sage-Tree, with broad hoary Leaves, and yellow Flowers.

4. PHLOMIS; *Narbonenſis, Hormini folio, flore purpuraſcente. Tourn.* Narbon Jeruſalem Sage, with a Clary Leaf, and purpliſh Flower.

5. PHLOMIS; *Hiſpanica, candidiſſima, herbacea. Tourn.* Spaniſh Jeruſalem Sage, with very hoary Leaves.

6. PHLOMIS; *Lychnitis. Cluſ. Hiſt.* Narrow-leav'd Jeruſalem Sage.

7. Phlomis; *Samia, herbacea, lunariæ folio. T. Cor.* Herbaceous Samian Jeruſalem Sage, with a Moonwort Leaf.

8. Phlomis; *Orientalis, foliis laciniatis. T. Cor.* Eaſtern Jeruſalem Sage, with jagged Leaves.

9. Phlomis; *Orientalis, lutea, herbacea, latifolia, verticillata. Act. Phil.* Broad-leav'd Herbaceous Jeruſalem Sage from the *Levant*, with yellow Flowers growing in Whorles.

The three firſt-mention'd Sorts grow to be Shrubs of a middling Size, and are proper to intermix with other Sorts of Plants which are of the ſame Growth in ſmall Wilderneſs Quarters, where, by the Diverſity of their hoary Leaves, their large Spikes of yellow Flowers, and their long Continuance in flower, they make an agreeable Variety.

Theſe Plants have been preſerv'd in Pots, and placed in the Greenhouſe in Winter among other tender Exoticks: but they are hardy enough to endure the Cold of our ordinary Winters in the open Air, provided they are planted in a dry Soil, and have a warm Situation; and are rarely injured by Cold, unleſs in a very ſevere Froſt.

They are propagated by Cuttings in this Country; for their Seeds do ſeldom ripen well in *England*, except in very warm dry Seaſons. The beſt time to plant theſe Cuttings is in *May*, that they may have good Roots before Winter: They ſhould be planted in a Bed of freſh light Earth, and ſhaded from the Sun until they have taken Root; after which they will require no farther Care, but only to keep them clear from Weeds until the following Spring, when they may be removed to the Places where they are deſign'd to be continu'd.

The beſt Seaſon for tranſplanting them is in *March*, before they begin to ſhoot, obſerving to preſerve a Ball of Earth to the Root of each Plant, as alſo to water 'em until they have taken Root: And in order to form them into a regular Shape, they ſhould be ſtak'd, and their Stems kept conſtantly faſten'd thereto, until they arrive at the Height you deſign 'em; then you may ſuffer their Branches to ſhoot out on every Side, to make a handſome Head; in order to which, you ſhould prune off ſuch Branches as grow irregular to either Side, which muſt always be perform'd in Summer; for if they are wounded in Winter, the Cold does often injure the Plants, by entering the Wounds.

The Soil in which they are placed ſhould not be dung'd, for that cauſes them to grow too faſt, whereby their Shoots are too replete with Moiſture, and ſo leſs capable to endure the Cold; whereas if they are planted upon a dry, barren, rocky Soil, they are ſeldom injured by Cold, which is the Caſe of moſt of the ſame Claſs of Plants with Lip-flowers.

The other Sorts are all of them propagated by parting of their Roots, which ſhould be done in the Spring of the Year, obſerving to preſerve a leading Bud to each Off-ſet: Theſe ſhould alſo be placed in a dry, rocky, or gravelly Soil, in which they will thrive much better than if planted in a richer Ground, and will endure the Cold of our ordinary Winters extremely well in the open Air.

Theſe are Plants of no great Beauty, but are preſerved in the

Gardens of thoſe who are fond of Variety. A *Tea* made with the Leaves of theſe Plants, is accounted very good for ſore Throats.

PHYTOLACCA; American Night-ſhade.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves, which are placed in a circular Order, and expand in form of a Roſe; out of whoſe Centre riſes the Pointal, which afterwards becomes a ſoft Fruit, or almoſt globular Berry full of Seeds, placed orbicularly: To which ſhould added, that the Flowers and Fruit are produced on a Bunch like Currants.

The *Species* are;

1. Phytolacca; *Americana, majori fructu. Tourn.* American Night-ſhade, with large Fruit, *commonly call'd,* Virginian Poke *or* Porke Phyſick.

2. Phytolacca; *Americana, minori fructu. Tourn.* American Night-ſhade, with leſſer Fruit.

The firſt of theſe Plants is very common in *Virginia, New-England,* and *Maryland,* where the Inhabitants take a ſpoonful or two of the Juice of the Root, as a familiar Purge: The Berries thereof are full of a purple Juice, which gives a fine Tincture to Paper, from whence it hath the Name; but it will not abide long.

It may be propagated by ſowing the Seeds in the Spring, upon a Bed of light rich Earth; and when they come up, they ſhould be tranſplanted into a Bed of rich dry Earth about two Feet aſunder; for they grow to be very large, eſpecially if the Soil be good. When they have taken Root, they will require no farther Care but only to clear 'em from Weeds, and in the Autumn they will produce their Flowers and Fruit: but when the Froſt comes on, it will cut down the Tops of theſe Plants, which conſtantly decay in Winter; but their Roots will abide in the Ground, and come up again the ſucceeding Spring. There is no great Beauty in this Plant; but, for Variety, a few of them may be placed in the Borders of large Gardens, ſince they require but little Culture.

The Sort with leſſer Fruit is tenderer than the former, and requires to be placed in an artificial Heat in Winter, otherwiſe they will not endure the Cold of our Winters in *England:* This is alſo propagated from the Seeds, which ſhould be ſown upon a moderate Hot-bed in the Spring; and when the Plants come up, they ſhould be tranſplanted each into a ſeparate ſmall Pot fill'd with light freſh Earth, and plung'd into another moderate Hot-bed to bring them forward: but when they have acquired ſome Strength, they ſhould be inured to bear the open Air by Degrees, into which they may be removed in *July,* obſerving to ſhift them into larger Pots, as their Roots ſhall require, and place them where they may be ſhelter'd from ſtrong Winds.

In this Situation they may remain 'till the Beginning of *September,* when they ſhould be remov'd into the Stove, placing them where they may have a temperate Warmth; and during the Winter Seaſon you ſhould frequently refreſh them with Water, but they muſt not have it in too great Quantities.

Theſe Plants will grow to be three Feet high, and may be train'd up with regular Stems and Heads they will continue three or fou Years, if carefully preſerv'd, continue to produce Bunches ſma ſmall ſcarlet Berries throughout the Whole Year; which affords a pleaſing Variety, amongſt other Exoticks in Winter, when few other things are in Beauty: The Berries thereof are full of a beautiful red Juice, which will ſtain Paper extremely fine, but will not continue.

PILOSELLA; *vide* Hieracium.

PIMPINELLA; Burnet.

The *Characters* are;

The Flower conſiſts of one Leaf, which expands in a circular Form, and is generally cut into four Segments, to the Center, accompanied with many Chives, or a tufted Pointal; the Flower-cup afterwards becomes a Fruit, for the moſt part ſharp-pointed and Quadrangular; having ſometimes but one Cell, and at other times two Cells, which are full of oblong Seeds.

The *Species* are;

1. Pimpinella; *ſanguiſorba, minor lævis. C. B. P.* Common or leſſer Burnet.

2. Pimpinella; *ſanguiſorba, major. C. B. P.* Great Burnet.

3. Pimpinella; *major, præalta, auriculata, Sabauda. Bocc. Muſ.* Great rigid tall Burnet, with auriculated Leaves.

4. Pimpinella; *maxima, Canadenſis. Corn.* Greateſt Canada Burnet.

There are ſome other Species of this Plant, which are preſerved in curious Botanick Gardens for Variety: But thoſe here mentioned are what I have obſerved in the *Engliſh* Gardens.

The common *Burnet* is found wild in great Plenty upon dry chalky Hills, in divers Parts of *England*; yet is often cultivated in Gardens for medicinal Uſes; though the Herb gather'd on its native Place of Growth, is much ſtronger, and fitter for ſuch Purpoſes.

The ſecond Sort is found growing in moiſt Meadows, and other wet Soils in divers Parts of *England*, and is rarely cultivated in Gardens.

The other two Sorts are Strangers to our Country, but are hardy enough to endure the Cold of our Climate in the open Air. Theſe may be propagated either by ſowing of the Seeds, or parting their Roots.

The beſt Time for parting their Roots, is in the Autumn, that they may take good Root before the Drought of the Spring hinders their Growth. They ſhould be planted in Beds of light dry Earth, about ten Inches or a Foot aſunder, for if they have not Room to ſpread, they will rot each other. In *May* they will ſhoot up to flower; but if you would preſerve the Roots, the Stems ſhould be conſtantly cut off, for if they are permitted to ſeed, they ſeldom remain long after.

They may alſo be propagated by ſowing their Seeds upon a Bed of light Earth in the Spring, and when the Plants are come up, they ſhould be tranſplanted out into a Bed of freſh Earth, at the Diſtance beforemention'd, obſerving to water and ſhade them until they have taken Root, after which they will require no farther Care, but to keep them clear from Weeds. The firſt Sort is what ſhould be uſed in Medicine, and the Leaves of that are alſo put into cool Tankards in the Heat of Summer, as a Cordial Herb.

PINASTER; *vide* Pinus Sylveſtris.

PINUS; The Pine Tree.

The *Characters* are;

It hath amentaceous Flowers (or

Catkins) *which are produced at remote Diſtances from the Fruit on the ſame Tree; the Seeds are produced in ſquamous Cones; to which ſhould be added, that the Leaves are longer than thoſe of the* Firr-Tree, *and are produced by Pairs out of each Sheath.*

The *Species* are;

1. Pinus; *ſativa. C. B. P.* The manured *Pine.*

2. Pinus; *ſylveſtris. C. B. P.* The Pinaſter or wild *Pine.*

3. Pinus; *ſylveſtris, foliis brevibus, glaucis, conis parvis, albentibus. Ray Hiſt.* The Scotch *Pine, commonly called* the Scotch Firr.

4. Pinus; *Americana, foliis prælongis, ſubinde ternis, conis plurimis conſertim naſcentibus. Rand.* American *Pine,* with longer Leaves coming out by Threes, and many Cones growing in a Cluſter, *commonly called,* The Cluſter Pine.

5. Pinus; *Americana, ex uno folliculo ſetis, longis tenuibus, triquetris, ad unum angulum, per totam longitudinem, minutiſſimis crenis aſperatis. Pluk. Amalth.* Lord *Weymouth*'s *Pine*; *vulgò.*

The Culture and Management of theſe Trees, being the ſame as for *Firrs,* is fully ſet down adjoining to that Article, for which the Reader is deſired to turn back to *Abies.*

PISTACHIA; *vide* Terebinthus.

PISUM; Pea.

The *Characters* are;

It is a Plant with a papilionaceous Flower, out of whoſe Empalement riſes the Pointal, which afterwards becomes a long Pod, full of roundiſh Seeds; to which muſt be added, fiſtulous Stalks, for the moſt part weak, which the Leaves embrace in ſuch a Manner, that they ſeem to be perforated by them; but the other Leaves grow by Pairs along the Mid-rib, ending in a Tendril.

The *Species* are;

1. Pisum; *hortenſe majus, flore fructuque albo. C. B. P.* The greater Garden Pea with white Flowers and Fruit.

2. Pisum; *præcox, Anglicum. Boerh. Ind.* Hot-ſpur Pea; *vulgò.*

3. Pisum; *humile, caule firmo. Tourn.* The Dwarf Pea.

4. Pisum; *humile Gallicum. Boerh. Ind.* French Dwarf Pea.

5. Pisum; *cortice eduli. Tourn.* Pea with an eſculent Husk.

6. Pisum; *ſiliquâ carnosâ, incurvâ, ſeu falcatâ, eduli. Raii Hiſt.* The Sickle Pea; *vulgò.*

7. Pisum; *arvenſe, fructu albo. C. B. P.* Common white Pea.

8. Pisum; *arvenſe, fructu viridi. C. B. P.* Green Rouncival Pea.

9. Pisum; *arvenſe, fructu cinereo. C. B. P.* The Grey Pea.

10. Pisum; *arvenſe, flore roſeo, fructu variegato. Raii Hiſt.* Maple Rouncival Pea.

11. Pisum; *umbellatum. C. B. P.* The Roſe Pea or Crown Pea.

12. Pisum; *maximum, fructu nigrâ lineâ maculato. H. R. Par.* The Spaniſh Morotto Pea.

13. Pisum; *hortenſe, ſiliquâ maximâ. H. R. Par.* The Marrow-fat or Dutch Admiral Pea.

14. Pisum; *fructu maximo, ex viridi obſoleto. Boerh. Ind.* The Union Pea.

15. Pisum; *ſpontaneum, maritimum Anglicum. Park. Theat.* Engliſh Sea Pea.

16. Pisum; *arvenſe, fructu è luteo vireſcente. C. B. P.* Pig Peas.

There are ſeveral other Varieties of the Garden *Peas,* which differ in the Colour of their Flowers and Fruit, and are by ſome Perſons diſtinguiſhed by Names as diſtinct Sorts; but as they are very ſubject to vary when ſown two or three

Years in the ſame Place, ſo there can be no doubt of their being ſeminal Variations, which are not worth enumerating in this Place.

The *Engliſh Sea Pea*, is found wild upon the Shore in *Suſſex*, and ſeveral other Counties in *England*; this was firſt taken Notice of in the Year 1555, between *Oxford* and *Aldborough*, where it grew upon the Heath, where nothing, no not Graſs, was ever ſeen to grow, and the poor People being in Diſtreſs, by Reaſon of the Dearth of that Year, gathered large Quantities of theſe *Peas*, and ſo preſerved themſelves and Families: This is mentioned by *Stow* in his *Chronicle*, and *Cambden* in his *Britannia*. But they were both miſtaken, in imagining that they were *Peas* caſt on Shoar by a Shipwreck, ſeeing they grow in divers other Parts of *England*, and are undoubtedly a different Species from the common *Pea*.

The Sixteenth Sort is greatly cultivated in the Fields in *Dorſetſhire*, where they are known by the Name of *Pig Peas*, the Inhabitants making great Uſe of them to feed their Hogs. Theſe are alſo often brought up to *London* and ſold for the ſame Purpoſe.

I ſhall now proceed to ſet down the Method of cultivating the ſeveral Sorts of Garden *Peas*, ſo as to continue them throughout the Seaſon.

It is a common Practice with the Gardeners near *London*, to raiſe *Peas* upon Hot-beds, to have them very early in the Spring, in order to which, they ſow their *Peas* upon warm Borders under Walls or Hedges, about the Middle of *October*; and when the Plants come up, they draw the Earth up gently to their Stems with a Hoe, the better to protect them from Froſt; in theſe Places they let them remain until the latter End of *January*, or the Beginning of *February*, obſerving to earth them up from time to time as the Plants advance in Height (for the Reaſons before laid down) as alſo to cover them in very hard Froſt with Peas-haulm, Straw, or ſome other light Covering, to preſerve them from being deſtroy'd, then at the Time beforemention'd, they make a Hot-bed (in proportion to the Quantity of *Peas* intended) which muſt be well work'd in laying the Dung, that the Heat may not be too great: The Dung ſhould be laid about two Feet thick or ſomewhat more, according as the Beds are made earlier or later in the Seaſon; when the Dung is equally levelled, then the Earth (which ſhould be light and freſh, but not over rich) muſt be laid on about Six Inches thick, laying it equally all over the Bed: This being done, the Frames (which ſhould be two Feet deep on the Back-ſide, and about fourteen Inches in Front) muſt be put on, and cover'd with Glaſſes, after which it ſhou'd remain three or four Days, to let the Steam of the Bed paſs off, before you put the Plants therein; obſerving every Day to raiſe the Glaſſes either with Bricks or Stones, to give Vent for the riſing Steam to paſs off; then when you find the Bed of a fine moderate Temperature for Heat, you ſhould with a Trowel, or ſome other Inſtrument, take up the Plants as carefully as poſſible, to preſerve a little Earth to their Roots, and plant them into the Hot-bed in Rows, about a Foot aſunder, and the Plants ſhould be ſet about an Inch and Half, or two Inches diſtance from each other in the Rows;

obſerving to water and ſhade them until they have taken Root; after which you muſt be careful to give them Air, at all Times when the Seaſon is favourable, otherwiſe they will draw up very weak, and be ſubject to grow mouldy and decay. You ſhould alſo draw the Earth up to the Shanks of the Plants, as they advance in Height, and keep them always clear from Weeds; the Water they ſhould have, muſt be given them ſparingly, for if they are too much water'd, it will cauſe them to grow too rank, and ſometimes rot off the Plants at their Shanks, juſt above Ground; when the Weather is very hot, you ſhould cover the Glaſſes with Mats in the Heat of the Day, to ſcreen them from the Violence of the Sun, which is then too great for them, cauſing their Leaves to flag, and their Bloſſoms to fall off without producing Pods; as will alſo the keeping of the Glaſſes too cloſe at that Seaſon. But when the Plants begin to fruit, they ſhould be water'd oftener, and in greater Plenty than before; for by that Time the Plants will have nearly done growing, and the often refreſhing them will occaſion their producing a greater Plenty of Fruit.

The Sort of *Pea* which is always uſed for this Purpoſe, is the Dwarf; for all the other Sorts ramble too much to be kept in Frames: the Reaſon for ſowing them in the common Ground, and afterwards tranſplanting them on a Hot-bed, is alſo to check their Growth, and cauſe them to bear in leſs Compaſs; for if the Seeds were ſown upon a Hot-bed, and the Plants continued thereon, they would produce ſuch luxuriant Plants as not to be contained in the Frames, and would bear but little Fruit.

The next Sort of *Pea*, which is ſown to ſucceed thoſe on the Hot-beds, is the *Hot-ſpur*, of which there are reckon'd three or four Sorts, as the *Maſter's Hot-ſpur*, the *Reading Hot-ſpur*, and ſome others; which are very little differing from each other, except in their early Bearing, for which the *Maſter's Hot-ſpur* is chiefly preferr'd; tho' if either of theſe Sorts are cultivated in the ſame Place for three or four Years, they are apt to degenerate and be later in Fruiting, for which Reaſon moſt curious Perſons procure their Seeds annually from ſome diſtant Place, and in the Choice of theſe Seeds, if they could be obtained from a colder Situation, and a poorer Soil, than that in which they are to be ſown, it will be much better than on the contrary, and they will come earlier in the Spring.

Theſe muſt alſo be ſown on warm Borders, towards the latter End of *October*, and when the Plants are come up, you ſhould draw the Earth up to their Shanks in the Manner before directed, which ſhould be repeated as the Plants advance in Height (always obſerving to do it when the Ground is dry) which will greatly protect the Stems of the Plants againſt Froſt; and if the Winter ſhould prove very ſevere, it will be of great ſervice to the Plants, to cover them with Peas-haulm, or ſome other light Covering, which ſhould be conſtantly taken off in mild Weather, and only ſuffer'd to remain on during the Continuance of the Froſt; for if they are kept too cloſe, they will be drawn very weak and tender, and thereby be liable to be deſtroy'd with the leaſt Inclemency of the Seaſon.

In the Spring you muſt carefully clear them from Weeds, and draw ſome freſh Earth up to their Stems; but do not raiſe it too high to the Plants, leſt by burying their Leaves you ſhould rot their Stems, as is ſometimes the Caſe, eſpecially in wet Seaſons. You ſhould alſo obſerve to keep them clear from Vermin, which if permitted to remain amongſt the Plants, will increaſe ſo plentifully, as to devour the greateſt Part of them; the chief of the Vermin which infect *Peas*, are the *Slugs*, which lie all the Day in the ſmall Hollows of the Earth near the Stems of the Plants, and in the Night-time come out and make terrible Deſtruction of the *Peas*; and theſe chiefly abound in wet Soils, or where a Garden is neglected and over-run with Weeds; therefore you ſhould make the Ground clear every Way round the *Peas*, to deſtroy their Harbours, and afterwards in a fine, mild Morning, very early, when theſe Vermin are got abroad from their Holes, you ſhould ſlack a Quantity of *Lime*, which ſhould be ſown hot over the Ground, pretty thick, which will deſtroy the Vermin, where-ever it happens to fall upon them; but will do very little Injury to the *Peas*, provided it be not ſcatter'd too thick upon them: This is the beſt Method I could ever find to deſtroy theſe troubleſome Vermin.

If this Crop of *Peas* doth hit, it will immediately ſucceed thoſe on the Hot-bed; but for fear this ſhould miſcarry, it will be proper to ſow two more Crops, at about a Fortnight diſtance from each other; ſo that there may be the more Chances to ſucceed: This will be ſufficient until the Spring of the Year, when you muſt ſow at leaſt two more Crops of theſe *Peas*; one toward the latter End of *January*, and the other a Fortnight after: theſe two later Sowings, will be ſufficient to continue the early Sort of *Peas* through the firſt Seaſon, and after this it will be proper to have ſome of the large Sorts of *Peas* to ſucceed them; in order to which, you ſhould ſow ſome of the *Spaniſh Morotto*, which is a great Bearer, and a hardy Sort of *Pea*, about the Middle of *February*, upon a clear open Spot of Ground; theſe muſt be ſown in Rows, about two Feet and a Half aſunder, and the *Peas* ſhould be dropped in the Drills about an Inch and a half diſtance, covering them about two Inches deep with Earth, being very careful that none of them lie uncovered, which will draw the *Mice*, *Pigeons* or *Rooks* to attack the whole Spot; and it often happens by this Neglect, that a whole Plantation is devour'd by theſe Creatures; whereas when there are none of the *Peas* left in ſight, they do not ſo eaſily find them out.

About a Fortnight after this, you ſhould ſow another Spot, either of this Sort, or any other large Sort of *Pea* to ſucceed thoſe, and then continue to repeat ſowing once a Fortnight till the Middle or latter End of *April*, ſome of theſe Kinds, only obſerving to allow the *Marrow-fats*, and other very large Sorts of *Peas*, at leaſt three Feet between Row and Row; and the *Roſe Pea* ſhould be allowed at leaſt eight or ten Inches diſtance Plant from Plant, in the Rows; for theſe grow very large, and if they have not Room allowed them, they will ſpoil each other, by drawing up very tall, and will produce no Fruit.

When theſe Plants come up, the Earth ſhould be drawn up to their Shanks (as was before directed) and the Ground kept entirely clear from Weeds; and when the Plants are grown eight or ten Inches high, you ſhould ſtick ſome rough Boughs, or bruſh Wood, into the Ground cloſe to the *Peas*, for them to ramp upon, which will ſupport them from trailing upon the Ground, which is very apt to rot the large growing Sorts of *Peas*, eſpecially in wet Seaſons: beſides, by thus ſupporting them, the Air can freely paſs between them, which will preſerve the Bloſſoms from falling off before their Time, and occaſion them to bear much better, than if permitted to lie upon the Ground; and there will be Room to paſs between the Rows to gather the *Peas* when they are ripe.

The Dwarf Sorts of *Peas* may be ſown much cloſer together, than thoſe before-mentioned; for theſe ſeldom riſe above a Foot high, and rarely ſpread above half a Foot in width; ſo that theſe need not have more Room than two Feet Row from Row, and about an Inch aſunder in the Rows. Theſe will produce a good Quantity of *Peas*, provided the Seaſon be not over dry; but they ſeldom continue long in bearing, ſo that they are not ſo proper to ſow for the main Crop, when a Quantity of *Peas* is expected for the Table: their chief Excellency being for Hot-beds, where they will produce a greater Quantity of *Peas* (provided they are well manag'd) than if expos'd to the open Air, where the Heat of the Sun ſoon dries them up.

The *Sickle Pea* is much more common in *Holland* than in *England*, it being the Sort moſtly cultivated in that Country; but in *England* they are only propagated by curious Gentlemen for their own Table, and are rarely brought into the Markets; this Sort the Birds are very fond of; and if they are not prevented, do many times deſtroy the whole Crop. This ſhould be planted in Rows, about two Feet and a half aſunder, and be managed as hath been directed for the other Sorts.

The *Grey*, and other large Winter *Peas*, are ſeldom cultivated in Gardens, becauſe they require a great deal of Room; but are uſually ſown in Fields, in moſt Parts of *England*. The beſt Time for ſowing of theſe, is about the Beginning of *March*, when the Weather is pretty dry, for if they are put into the Ground in a very wet Seaſon, they are apt to rot, eſpecially if the Ground be cold; theſe ſhould be allowed at leaſt three Feet diſtance Row from Row, and muſt be ſown very thin in the Rows; for if they are ſown too thick, the Haulm will ſpread ſo as to fill the Ground, and ramble over each other, which will cauſe the Plants to rot, and prevent their Bearing.

The beſt Method to ſow theſe *Peas*, is, to draw a Drill with a Hoe by a Line, about two Inches deep, and then ſcatter the Seeds therein, after which, with a Rake you may draw the Earth over them, whereby they will be equally covered; and this is a very quick Method for Gardens; but where they are ſown in Fields, they commonly make a ſhallow Furrow with the Plough, and ſcatter the Seeds therein, and then with a Harrow they cover them over again. After this, the great Trouble is to keep them clear from Weeds, and draw the Earth up to the Plants; this, in ſuch Countries where Labour is dear, is a great Expence, to do it by Hand with a Hoe; but this may be eaſily effected with a Breaſt-hoeing Plough, which may be drawn through between the Rows, which will entirely eradicate the Weeds, and by ſtirring of the Soil, render it mellow, and greatly promote the Growth of the Plants.

When any of theſe Sorts are intended for Seed, there ſhould be as many Rows of them left ungather'd, as may be thought neceſſary to furniſh a ſufficient Quantity of Seed; theſe muſt remain until their Pods are changed brown, and begin to ſplit; when you ſhould immediately gather them up together with the Haulm, and if you have not Room to ſtack them up until Winter, you may thraſh them out ſo ſoon as they are dry, and put them up in Sacks for Uſe: But you muſt be very careful not to let them remain too long abroad after they are ripe, for if Wet ſhould happen, it would rot them, and Heat after a Shower of Rain, would cauſe their Pods to burſt and caſt forth their Seeds, ſo that the greateſt Part of them would be loſt; but, as I ſaid before, it is not adviſeable to continue ſowing of the ſame Seed longer than two Years, for the Reaſons there laid down; but rather to exchange your Seeds every Year, or every two Years at leaſt, whereby you may always expect to have them prove well.

PLANTAIN TREE; *vide* Muſa.

PLANTING; Although the Method of *Planting* the various Sorts of Trees, is fully ſet down, under the ſeveral Articles where each Kind is mentioned, yet it may not be amiſs to ſay ſomething in general upon that Head in this Place; which ſhall be ſet down as briefly as poſſible. And,

Firſt, The firſt Thing in the *Planting* of Trees, is to prepare the Ground (according to the different Sorts of Trees you intend to plant) before the Trees are taken out of the Earth; for you ſhould ſuffer them to remain as little Time out of the Ground as poſſible.

In taking up the Trees, you ſhould carefully dig away the Earth round their Roots, ſo as to come at their ſeveral Parts to cut them off, for if they are torn out of the Ground without Care, the Roots will be broken and bruiſed very much, to the great Injury of the Trees. When you have taken them up, the next thing is to prepare them for *Planting*, in doing of which, there are two Things to be principally regarded; the one is to prepare the Roots, and the other to prune their Heads, in ſuch a Manner, as may be moſt ſerviceable in promoting the future Growth of the Trees.

And firſt, as to the Roots; all the ſmall Fibres are to be cut off, as near to the Place from whence they are produc'd, as may be (excepting ſuch Trees as are to be replanted, immediately after they are taken up) otherwiſe the Air will turn all the ſmall Roots and Fibres black; which, if permitted to remain on, when the Tree is planted, will grow mouldy and decay, and thereby ſpoil all the new Fibres which are produc'd; ſo that many times the Trees miſcarry for want of duly obſerving this: After the Fibres are all cut off, you ſhould prune off all the bruis'd or broken Roots ſmooth, otherwiſe they are apt to rot and diſtemper the Trees; you ſhould alſo cut out all irregular Roots which croſs each other, and all downright Roots (eſpecially in Fruit-Trees) muſt be cut off; ſo that when the Roots are regularly prun'd, they may in ſome meaſure reſemble the Fingers of a Hand, when ſpread open; then you ſhould ſhorten the larger Roots, in proportion to the Age and Strength of the Tree; as alſo the particular Sorts of Trees, are to be conſider'd, for the *Wallnut*, *Mulberry*, and ſome other tender-rooted Kinds, ſhould not be pruned ſo cloſe, as the more hardy Sorts of Fruit or Foreſt Trees, which in young Fruit Trees, ſuch as *Pears*, *Apples*, *Plumbs*, *Peaches*, &c. that are one Year old, from budding or grafting, may be left about eight or nine Inches long; but in older Trees, they muſt be left of a much greater Length; but this is to be underſtood of the larger Roots only, for the ſmall ones muſt be chiefly cut quite out, or pruned very ſhort, their extream Parts, which are generally very weak, do commonly decay after moving, ſo that it is the better Way intirely to diſplace them.

The next thing is the Pruning of their Heads, which muſt be differently perform'd in different Trees, and the Deſign of the Trees, muſt alſo be conſider'd; for if they are intended for Walls or Eſpaliers, it is the better way to plant them with the greateſt Part of their Heads, which ſhould remain on until the Spring, that the Trees begin to ſhoot, when they muſt be cut down to five or ſix Eyes (as is fully ſet down in the ſeveral Articles of the various Kinds of Fruit) being very careful in doing of this, not to diſturb the new Roots.

But if the Trees are deſign'd for Standards, you ſhould prune off all the ſmall Branches cloſe to the Places where they are produced, as alſo irregular Branches which croſs each other, and by their Motion when agitated by the Wind, do rub and bruiſe each other, ſo as to occaſion many times great Wounds in thoſe Places; beſides, it makes a diſagreeable Appearance to the Sight, and adds to the Cloſeneſs of its Head, which ſhould always be avoided in Fruit Trees; whoſe Branches ſhould be preſerved as far diſtant from each other, as they are uſually produced when in a regular way of Growth (which is in all Sorts of Trees proportionable to the Size of their Leaves, and Magnitude of their Fruit (for when their Heads are very thick (which is often occaſioned by the unskilful ſhortening of their Branches) the Sun and Air cannot freely paſs between their Leaves, ſo that the Fruit muſt be ſmall and ill taſted. But to return; After having diſplaced theſe Branches, you ſhould alſo cut off all ſuch Parts of Branches, as have by any Accident been broken or wounded; for theſe will remain a diſagreeable Sight, and often occaſion a Diſeaſe in the Tree. But you ſhould, by no means, cut off the main, leading Shoots, as is, by too many, practis'd, for thoſe are neceſſary to attract the Sap from the Root, and thereby promote the Growth of the Tree: For, from ſeveral Experiments which I made the Winter 1729, by cutting off the Branches of ſeveral Sorts of Trees, and putting them into Phials fill'd with Water, whoſe Tops were cloſely cover'd, to prevent the evaporating of the Water, I found, that thoſe Shoots whoſe leading Buds were preſerved, did attract the Moiſture in much greater Quantity, than thoſe Shoots whoſe Tops were cut off: And from ſeveral Experiments made by the Reverend Mr. *Hales*, we find, that great Quantities of Moiſture are imbib'd at Wounds, where Branches are cut off; ſo that by thus ſhortening the Branches, the Wet, which generally falls in great Plenty during the Winter Seaſon, is plentifully imbib'd, and for want of Leaves to perſpire it off, mixes with the Sap of the Trees, and thereby diſtending the Veſſels, deſtroys their contracting Force, which many times kills the Tree, or at leaſt weakens it ſo much, as not to be recovered again for ſome Years; as I have ſeveral times obſerved.

But being willing to try the Experiment, in the Month of *October* 1723, I made choice of two Standard Almond-Trees, of equal Strength and Age; theſe I took up as carefully as poſſible, and having prepar'd their Roots as before directed, I prun'd their Heads in the following manner, *viz.* From one of them I only cut off the ſmall Branches, and ſuch as were bruis'd or broken, but preſerv'd all the ſtrong ones entire: The other I ſhortened all the ſtrong Branches, and prun'd off the weak and broken Shoots, as is the common Practice. Theſe two Trees I planted in the ſame Soil, and to the ſame Situation, gave them both equal Attendance, and manag'd them both as nearly alike as poſſible; yet, in the Spring, when theſe Trees began to ſhoot, that, whoſe Branches, were entirely preſerved, came out early, continued to ſhoot ſtronger, and is at preſent much larger, and in better Health than the other. And ſince this, I have made ſeveral other Experiments of the like Nature, which have conſtantly ſucceeded in the ſame Manner; from whence it is reaſonable to conclude, that the ſhortening of the Branches is a great Injury to all new-planted Trees.

Having thus prepared the Trees for *Planting*, we muſt next proceed to the Placing them into the Ground; but before this, I would adviſe, if the Trees have been long out of the Ground, ſo that their Fibres are dry'd, to place their Roots in Water eight or ten Hours, before they are *planted*, obſerving to place them in ſuch a Manner, that their Heads may remain erect, and their Roots only immers'd therein, which will ſwell the dry'd Veſſels of the Roots, and prepare them to imbibe Nouriſhment from the Earth. In fixing of them, great Regard ſhould be had to the Nature of the Soil, which, if cold and moiſt, the Trees ſhould be *planted* very ſhallow; as alſo, if it be a hard Rock or Gravel, it will be much the better Way to raiſe a Hill of Earth where each Tree is to be *planted*, than to dig into the Rock or Gravel, and fill it up with Earth (as is too often practis'd) whereby the Trees are *planted*, as it were, in a Tub, there being but little Room for their Roots to extend; ſo that after two or three Years Growth, when their Roots have extended to the Sides of the Hole, they are ſtopp'd by the Rock or Gravel, can get no farther, and the Trees will decline, and, in a few Years, die; beſides, theſe Holes do detain the Moiſture, ſo that the Fibres of the *Plants* are often rotted thereby. But when they are raiſed above the Surface of the Ground, their Roots will extend, and find Nouriſhment, tho' the Earth upon the Rock or Gravel be not three Inches thick, as may be frequently obſerved, where Trees are thus placed.

The next thing to be obſerved, is, to place the Tree in the Hole in ſuch Manner, that the Roots may be about the ſame Depth in the Ground, as they were growing before they were taken up: Then break the Earth fine with a Spade, and ſcatter it into the Hole, ſo that it may fall in between every Root, that there may be no Hollowneſs in the Earth (but you ſhould by no Means ſift or ſcreen the Mould, for Reaſons given in the Article of *Firrs*) then having fill'd in the Earth, you ſhould gently tread it cloſe with your Feet; but do not make it too hard, which is a very great Fault, eſpecially if the Ground be ſtrong or wet.

Having thus *planted* the Trees, you ſhould provide a Parcel of Stakes, which ſhould be drove down by the Sides of the Trees, and faſtened thereto, to ſupport them from being blown down, or diſplaced by the Wind; and then lay ſome Mulch upon the Surface of the Ground, about their Roots, to prevent the Earth from drying.

This is to be underſtood of Standard Trees which caſt their Leaves; and as to ſuch as are *planted* againſt Walls, there is no other Difference in their Management, but only to preſerve their Heads entire, and to place their Roots about five or ſix Inches from the Wall inclining their Heads thereto; which ſhould be faſtened to the Wall, to prevent their being diſplaced by the Wind; and in the Spring following, juſt before they ſhoot, their Heads ſhould be cut down to five or ſix Buds, as is fully directed under the ſeveral Articles of the different Kinds of Fruit.

As to the Watering of all new *planted* Trees, I ſhould adviſe it to be done with great Moderation; nothing being more injurious to them than over-watering of 'em; Examples enough of this Kind may have been ſeen in St. *James's Park*, a few Years paſt, where there have been many Trees *planted* to make the Rows complete, where the old Trees were decay'd; and notwithſtanding the great Care in bringing in a large Quantity of freſh Earth, where each Tree was *planted*, yet very few of them have taken, and thoſe few which are yet alive, have made but poor Progreſs, nor will they ever be thriving Trees; which is wholly owing to the Abundance of Water given to them, whereby the Fibres are rotted off as ſoon as they are produced. And how can any Perſon imagine, that a Tree ſhould thrive, when the Ground in which it is *planted*, is continually floated with Water? For, by an Experiment made by the Reverend Mr. *Hales*, in placing the Roots of a *Dwarf Pear-Tree* in Water, the Quantity of Moiſture imbibed decreas'd very much daily, becauſe the Sap-Veſſels of the Roots, like thoſe of the cut-off Boughs in the ſame Experiment, were ſo ſaturated and clogged with Moiſture, by ſtanding in Water, that more of it could not be drawn up. And this Experiment was tried upon a Tree which was full of Leaves, and thereby more capable to diſcharge a large Quantity of Moiſture, than ſuch Trees as are entirely deſtitute of Leaves; ſo that it is impoſſible ſuch Trees can thrive, where the Moiſture is too great about their Roots.

The Seaſons for *Planting* are various, according to the different Sorts of Trees or the Soil in which they are *planted:* For ſuch Trees whoſe Leaves fall off in Winter, the beſt time is the Beginning of *October*, provided the Soil be dry; but for a wet Soil, it is better to defer it until the latter End of *February*, or the Beginning of *March*; and for Ever-greens, the Beginning of *April* is, by far, the beſt Seaſon, though they may be ſafely remov'd at *Midſummer*, provided they are not to be carried very far; but you ſhould always make Choice of a cloudy, moiſt Seaſon, if poſſible, when they will take freſh Root in a few Days. And, on the contrary, when theſe Trees are removed in Winter, during which time they are almoſt in a State of Reſt, they do not take Root until the Spring advances, and ſets the Sap in Motion, ſo that many times they die, eſpecially if the Winter proves ſevere.

As to the Preparing the Soil for *Planting*, that muſt alſo be done to ſuit the different Sorts of Trees, ſome requiring a light Soil, others a ſtrong one, *&c.* But this is fully ſet down in the ſeveral Articles of Trees, under their proper Heads, to which the Reader is deſired to turn; though for Fruit-Trees in general a freſh Soil from a Paſture-Ground, which is neither too light and dry, nor over ſtrong and moiſt, but rather a gentle, ſoft, loamy Earth, is to be preferr'd. And if it be for Wall Trees, it will be the better if the Borders are fill'd with this Earth ſix Feet wide, but it need not be above eighteen Inches or two Feet deep at moſt; for when the Borders are made too deep, the Roots of theſe Trees are enticed downward, which is of bad Conſequence to Fruit-Trees, as hath been elſe-where obſerved. The ſame alſo muſt be obſerved for Standard Trees (where freſh Earth is brought to the Places in which they are *planted)* not to make the Holes too deep, but rather let them have the ſame Quantity of Earth in Width, which is much to be preferr'd.

There are ſeveral Perſons who direct the Placing of the ſame Side of the Tree to the South, which, before removing, had that Poſition, as a material Circumſtance to be ſtrictly regarded; but from ſeveral Trials which I have made, I could not obſerve the leaſt Difference in the Growth of thoſe Trees which were ſo placed, and others which were reverſed; ſo that I conclude it is not of any Conſequence to obſerve this Method.

The Diſtance which Trees ſhould be *planted* at, muſt alſo be proportioned to their ſeveral Kinds, and the ſeveral Purpoſes for which they are intended; all which is explain'd under their ſeveral Heads; but Fruit-Trees, *planted* either againſt Walls, or for Eſpaliers, ſhould be allowed the following Diſtances. For moſt vigorous-ſhooting *Pear-Trees*, twenty four Feet; for *Apricocks*, ſixteen Feet; *Apples*, ſixteen Feet; *Peaches*, *Nectarines*, *Cherries*, and *Plumbs*, fourteen or ſixteen Feet, according to the Goodneſs of the Soil, or the Height of the Wall. But as theſe Things are mention'd in their ſeveral Articles, it will be needleſs to repeat any more in this Place.

PLATANUS; The Plane-Tree.

The *Characters* are;

It hath an amentaceous Flower, conſiſting of ſeveral ſlender Stamina, which are collected into ſpherical little Balls, and are barren; but the

Embryo's of the Fruit, which are produced on ſeparate Parts of the ſame Tree, are turgid, and do afterwards become large ſpherical Balls, containing many oblong Seeds, intermix'd with Down.

The *Species* are;

1. Platanus; *Orientalis, verus. Park. Theat.* The true Oriental *Plane-Tree.*

2. Platanus; *Occidentalis, aut Virginienſis. Park. Theat.* The Weſtern or Virginian *Plane-Tree.*

3. Platanus; *Orientalis, Aceris folio. T. Cor.* The Maple-leav'd *Plane-Tree.*

4. An Platanus; *Americanus, foliis oblongis ex adverſo naſcentibus.* The Button-Tree; *vulgò.*

The firſt of theſe Trees (though the firſt known Sort in *Europe*) is leſs common than the ſecond; which has been introduced ſince the *Engliſh* ſettled in *Virginia*; which may be, in a great meaſure, owing to the latter Sort being much eaſier to propagate than the former; for every Cutting of this, if planted in a moiſt Soil, juſt before the Tree begins to ſhoot, will take Root, and in a few Years make very large Trees; whereas the firſt is only propagated from Seeds or by Layers.

The third Sort, although by ſome ſuppos'd to be a diſtinct Species from either of the former, yet is no more but a ſeminal Variety of the firſt; for I have had many Plants which came up from the Seeds of the firſt Sort, which ripen'd in the *Phyſick-Garden*, which do moſt of them degenerate to this third Sort, which in the manner of its Leaves, ſeems to be very different from either, and might reaſonably be ſuppos'd a diſtinct Sort, by thoſe who have not traced its Original.

The fourth Sort here mention'd was ſent from *Carolina*, by the Nume of *Button-Tree*, and by the Account, ſent with it, ſeems to be a Sort of *Plane-Trees*, though the Manner of this Tree's growing is very different from any of the other Sorts; but as it hath not produced either Flowers or Fruit in *England*, ſo I cannot determine whether it be a true *Plane-Tree* or not.

Theſe Trees delight to grow on a moiſt, rich Soil, on which they will arrive to a prodigious Size in a few Years, and during the Summer Seaſon do afford a glorious Shade; their Leaves being of a prodigious Size, eſpecially on a good Soil, ſo that there is ſcarcely any Tree at preſent in *England*, which does afford ſo good a Shade. But the Backwardneſs of their coming out in Spring, together with their Leaves fading early in *Autumn*, has occaſioned their not being ſo generally eſteem'd, as otherwiſe they would be.

The firſt Sort was brought out of the *Levant* to *Rome*, where it was cultivated with much Coſt and Induſtry: The greateſt Orators and Stateſmen among the *Romans*, took great Pleaſure in their *Villa's* which were ſurrounded with *Platanus*; and their Fondneſs to this Tree became ſo great, that we frequently read of their *irrigating* them with *Wine* inſtead of *Water*. *Pliny* affirms, that there is no Tree whatſoever which ſo well defends us from the Heat of the Sun in Summer, nor that admits it more kindly in Winter, for the Branches being produced at a proportionable Diſtance, to the Largeneſs of their Leaves (which is what holds through all the different Sorts of Trees yet known) ſo that when the Leaves are fallen in Winter, the Branches growing at a great Diſtance, do eaſily admit the Rays of the Sun.

This Tree was afterwards brought to *France*, where it was cultivated only by Perſons of the firſt Rank; and ſo much was the Shade of it priz'd, as that if any of the Natives did but put his Head under it, they exacted a Tribute from them.

It is generally ſuppos'd, that the Introduction of this Tree into *England*, is owing to the great Lord Chancellor *Bacon*, who planted a noble Parcel of them at *Verulam*, which were there, very flouriſhing, a few Years ſince. But notwithſtanding its having been ſo long in *England*, yet there are but few very large Trees to be ſeen of it at preſent; which may, perhaps, be owing to the great Eſteem the Perſons of the laſt Age had for the *Lime*, which being much eaſier to propagate, and of quicker Growth, during the three or four firſt Years, than the *Plane-Tree*, thereby it became the moſt common Tree for Planting of Avenues and ſhady Walks near Habitations in *England*. But ſince the Defects of that Tree have been more generally diſcovered, the *Elm* has had the Preference, and is now the moſt commonly planted for ſuch Purpoſes.

However, notwithſtanding what has been ſaid of the *Plane-Tree*, of its Backwardneſs in coming out in the *Spring*, and the ſudden Decay of its Leaves in Autumn, yet, for the goodly Appearance, and great Magnitude to which it will grow, it deſerves a Place in large Plantations, or ſhady Receſſes near Habitations, eſpecially if the Plantation be deſign'd on a moiſt Soil, or near Rivulets of Water; in which Places this Tree will arrive to a prodigious Magnitude.

We read of one of theſe Trees which was growing at a *Villa* of the Emperor *Caligula*, whoſe Trunk was ſo large, as, when hollow'd, to make a Room, therein capacious enough to entertain ten or twelve Perſons at a Repaſt, and for their Servitors to wait upon them. And there is mention made of one of theſe Trees, which was growing in the *Eaſtern* Country, which was of ſo great a Magnitude, that *Xerxes* made his Army (which conſiſted of Seventeen hundred thouſand Men) halt, for ſome Days, to admire the Beauty and Procerity of this Tree; and became ſo fond of it, as to take his own, his Concubines, and all the great Perſons Jewels to cover it; and was ſo much enamour'd with it, that for ſome Days, neither the Concern of his Grand Expedition, nor Intereſt, nor Honour, nor the neceſſary Motion of his prodigious Army could diſſuade him from it: He ſtil'd it, His Miſtreſs, His Minion, His Goddeſs; and when he was obliged to part with it, he cauſed a Figure of it to be ſtamp'd on a Gold Medal, which he continually wore about him.

And ſuch was the Eſteem which the People of *Aſia* had for this Tree, that where-ever they erected any ſumptuous Buildings, the Portico's, which open'd to the Air, terminated in Groves of theſe Trees.

The *Eaſtern Plane-Tree* is propagated either from Seeds or by Layers, the latter of which is generally practis'd in *England*; though the Plants thus rais'd do ſeldom make ſo large, ſtrait Trees, as thoſe which are produc'd from Seeds;

but it has been generally thought, that the Seeds of this Tree were not productive, becauſe they have not been ſown at a proper Seaſon, nor managed in a right Manner; for I have had thouſands of the young Plants ſpring up from the Seeds of a large Tree, which ſcatter'd upon the Ground in a moiſt Place: And I ſince find, that if theſe Seeds are ſown ſoon after they are ripe, in a moiſt ſhady Situation, they will riſe extremely well; and the Plants thus obtain'd, will make a conſiderable Progreſs after the ſecond Year, being much hardier, and leſs liable to loſe their Tops in Winter, than thoſe which are propagated by Layers. And ſince the Seeds of this Tree ripen well in *England*, they may be propagated in as great Plenty as any other Foreſt Tree.

The *Virginian Plane-Tree* will grow extremely well from Cuttings, if they are planted the Beginning of *March* upon a moiſt Soil; and if they are water'd in dry Weather, will make a prodigious Progreſs. So that in a few Years from the Planting, they will afford noble Trees for planting of Avenues, and other ſhady Walks; and their Trunks are perfectly ſtrait, growing nearly of the ſame Size to a conſiderable Height, there being the leaſt Difference in the Girt of this Tree, for ſeveral Yards upwards, of any other Sort of Tree whatſoever. The Honourable *Paul Dudley*, Eſq; in a Letter to the *Royal Society*, mentions one of theſe Trees, which he obſerved in *New-England*, whoſe Girt was nine Yards, and held its Bigneſs a great Way up; which Tree, when cut down, made twenty-two Cord of Wood. He alſo ſays, in the ſame Letter, That he has propagated many of theſe Trees by cutting off Sticks of five or ſix Feet long, and ſetting them a Foot deep into the Ground in the Spring of the Year, when the Seaſon was wet; and that they always thrive beſt in a moiſt Soil.

The Leaves of this Sort are larger, and leſs divided than thoſe of the *Oriental Plane-Tree*; and the Tree grows much faſter, and is hardier, and being thus eaſily propagated, is now the moſt common in *England*.

The *Maple-leav'd Plane-Tree* hath its Leaves leſs divided than the firſt, but more than the ſecond Sort, ſo that it is a middle Kind, between both; tho', as I before ſaid, it comes originally from the *Eaſtern* Sort.

This is propagated very eaſily by Layers, every Twig of which will take Root, if they are but cover'd with Earth; and when tranſplanted out in a moiſt Soil, will grow equally faſt with the *Virginian* Kind. But whether this will take from Cuttings or not, I cannot ſay, having never made Trial of it; though from the Readineſs of the Branches taking Root, there is little Reaſon to doubt of it. The beſt time to tranſplant theſe Trees is in *March*; for if they are removed in Winter, and the Seaſon ſhould prove very ſevere, the tender Shoots are often kill'd by the Froſt.

PLUMB-TREE; *vide* Prunus.

PLUMBAGO; Lead-wort.

The *Characters* are;

The Flower conſiſts of one Leaf, which is ſhap'd like a Funnel, and cut into ſeveral Segments at the Top; out of whoſe fiſtulous Flower-cup riſes the Pointal, which afterwards becomes one oblong Seed, for the moſt part ſharp-pointed, which ripens in the Flower-cup.

The *Species* are;

1. PLUMBAGO; *quorundam. Cluſ. Hiſt.* Lead-wort, *or* Tooth-wort.

2. PLUMBAGO; *Americana, Beta folio ampliori. Plum.* American Lead-wort, with a broad Beet-leaf.

The firſt of theſe Sorts grows about *Naples*, in *Sicily*, and the Southern Parts of *France*, but is hardy enough to endure the Cold of our Climate in the open Ground, provided it be planted in a warm dry Soil. This is propagated by parting of the Roots in the Spring before they ſhoot: In doing of which, you ſhould be very careful to preſerve a Head to each Slip, otherwiſe they will not grow. They ſhould be planted in a warm Situation, and a dry Soil, about two Feet aſunder, and water'd until they take Root; after which they will require no farther Care, but to clear them from Weeds, and ſupport their Branches from being broken by the Wind. They commonly riſe about three Feet high, but, unleſs the Autumn be very favourable, they ſeldom flower in this Country. The Root of this Plant is ſometimes us'd in Medicine.

The ſecond is preſerv'd by ſuch as are curious in collecting Exotick Plants. This may be propagated in the ſame manner as the former, as alſo from Seeds, which ſhould be ſown upon a Hot-bed in the Spring; and when the Plants come up, they may be treated in the manner directed for *Amaranth's*; to which the Reader is deſir'd to turn, to avoid Repetition. Theſe Plants muſt be plac'd in the Stove in Winter, where they may have a moderate Degree of Warmth, and ſhould frequently be refreſh'd with Water. The ſecond Year they will produce Flowers in the Autumn, and if the Seaſon be warm, the Seeds will ripen. This Plant grows plentifully in *Jamaica* and the *Caribbee* Iſlands; and from the Name given it by Dr. *Boerhaave*, it doth alſo grow in *Ceylon*.

POINCIANA; Barbados Flower-Fence, *or* Spaniſh Carnations.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves, which are plac'd in a circular Order; in the Center of which ariſes a Number of crooked Stamina; the Pointal which ariſes from a quinquefid Flower-cup, becomes a long, broad, flat Pod, opening into two Parts, and fill'd with broad, flat, roundiſh Seeds, each of which is lodg'd in a ſeparate Cell, which are divided by a thin Partition.

We have but two *Species* of this Plant; which are,

1. POINCIANA; *flore pulcherrimo. Tourn.* Barbados Flower-Fence, with a fair Flower.

2. POINCIANA; *flore luteo. Houſt.* Flower-Fence with a yellow Flower.

The firſt Sort is very common in the *Caribbee* Iſlands, where it is planted for a Fence to divide Fields, and is greatly eſteem'd for the Beauty of its Flowers, which are produc'd on long Spikes in vaſt Quantities. The Leaves of this Plant are alſo us'd inſtead of *Sena*, to purge withal.

This was carry'd from *Cape Verd* Iſlands to *Berbados*. as is related by *Ligon*, and hath ſince been diſperſed through the other Iſlands. It grows in thoſe Countries to be ten or twelve Feet high, and the Stem is often as large as the Small of a Man's Leg, and the Wood is very hard; from whence it hath obtain'd the Name of *Ebony* in ſome Places. The ſecond Sort is a Variety of the firſt, differing only in the Colour of the Flowers, which in this are yellow, but the other are of a bright red Colour.

The Seeds of this Plant are annually brought over in Plenty from the *Weſt-Indies*, which, if ſown upon a Hot-bed, will riſe very eaſily: and when the Plants are come up, they ſhould be tranſplanted into ſmall Pots, and plung'd into a Hot-bed of Tanners-Bark, obſerving to ſhade them until they have taken Root; after which you muſt give them Air in Proportion to the Warmth of the Seaſon, and they muſt be frequently refreſh'd with Water. When the Plants have fill'd the Pots with their Roots, they ſhould be taken out, and plac'd into larger ones, that they may have Room to grow: If Care be taken to water and ſhift them as often as is neceſſary, they will grow to be three Feet high the firſt Seaſon. At *Michaelmas* the Pots ſhould be plung'd into a freſh Hot-bed of Tanners-Bark, in the Stove, which ſhould be kept to the *Anana's* Heat, mark'd on Mr. *Fowler's Thermometers*, and frequently refreſh'd with Water, but you muſt never give them large Quantities, which is very injurious to theſe Plants at that Seaſon. The Earth which theſe Plants ſhould be planted in, muſt be freſh, light, and ſandy (but not over rich;) in which they will ſtand the Winter better than if plac'd in a ſtronger Soil.

With this Management I have rais'd ſeveral Plants to be five Feet high; ſome of which I have preſerv'd two or three Years, and have had the Buds of the Flowers appear, but have not as yet been able to bring them to flower; tho' I am in hopes it may be effected, ſince the Improvements which are made every Year in the keeping of tender Plants, are very conſiderable.

POKE VIRGINIAN; *vide* Phytolacca.

POLEMONIUM; Greek Valerian, *or* Jacob's Ladder.

The *Characters* are;

The Flower conſiſts of one Leaf, which is divided deeply into five Parts, and is Wheel-ſhap'd; the Pointal which riſes from the Flower-cup, afterwards becomes a roundiſh Fruit, divided into three Cells, which are fill'd with oblong Seeds; to which ſhould be added, The Leaves are pinnated.

The *Species* are;

1. POLEMONIUM; *vulgare, caruleum. Tourn.* Green Valerian, with a blue Flower.

2. POLEMONIUM; *vulgare, album. Tourn.* Greek Valerian, with a white Flower.

3. POLEMONIUM; *vulgare, flore variegato. Tourn.* Greek Valerian, with a ſtrip'd Flower.

4. POLEMONIUM; *vulgare, foliis eleganter variegatis. Boerh. Ind.* Greek Valerian, with beautiful ſtrip'd Leaves.

The two firſt *Species* are very common in many *Engliſh* Gardens, where they are cultivated for the Beauty of their Flowers: They have alſo been found wild in *Carleton-Beek*, and about *Malham Cove* near *Craven*. The Sort with variegated Flowers, as alſo that with ſtrip'd Leaves, are Varieties which have been obtain'd from the former.

Theſe Plants are eaſily propagated, by ſowing their Seeds in the Spring upon a Bed of light Earth; and when they are come up pretty ſtrong, they ſhould be prick'd out into another Bed of the ſame light Earth, about three Inches aſunder, obſerving to ſhade and water them until they have taken Root, after which they will require no farther Care but to keep them clear from Weeds, until *Michaelmas*; at which time they muſt be tranſplanted into the Borders of the Flower-Garden, where, being intermix'd with different ſorts of Flowers, they will make a beautiful Appearance. Theſe produce their Flowers in *May* and *June*; and their Seeds ripen in *Auguſt*.

The variegated Kinds are preſerv'd by parting of their Roots, becauſe the Plants rais'd from Seeds would be ſubject to degenerate, and become plain. The beſt time to part them is about *Michaelmas*, that they may take good Root before the cold Weather prevents them. Theſe ſhould have a freſh light Soil, but if it be too rich, their Roots will rot in Winter, and their Stripes will go off.

POLIUM: Poley-Mountain.

The *Characters* are;

It hath a labiated Flower, conſiſting of one Leaf, whoſe Stamina ſupplies the Place of the Creſt; the Beard (or Under-lip) is divided into five Segments, as the Germander; out of the Flower-cup riſes the Pointal, attended, as it were, by four Embryo's, which afterwards become ſo many Seeds, ſhut up in the Flower-cup: To theſe Marks muſt be added, That the Flowers are collected into a Head upon the Tops of the Stalks and Branches.

The *Species* are;

1. Polium; *Montanum luteum.* C. B. P. Yellow Mountain *Poley*.
2. Polium; *Montanum, album.* C. B. P. White *Poley* Mountain.
3. Polium; *Lavendulæ folio.* C. B. P. *Poley* Mountain, with a Lavender-leaf.
4. Polium; *Lavendulæ folio, anguſtiori.* C. B. P. *Poley* Mountain, with a narrower Lavender-leaf.
5. Polium; *Pyreniacum, ſupinum, hederæ terreſtris folio. Tourn.* Creeping Pyrenian *Poley* Mountain, with a Ground-Ivy-Leaf.
6. Polium; *maritimum, erectum, Monſpeliacum.* C. B. P. Upright *Poley* Mountain of Montpelier.
7. Polium; *Montanum, luteum, ſerratis, anguſtioribus, incanis foliis Barrel* Yellow *Poley* Mountain, with narrow hoary ſerrated Leaves.

There are ſeveral other *Species* of this Plant, which are preſerv'd in ſome curious *Botanick* Gardens for Variety; but thoſe here mention'd, are what I have obſerv'd in the *Engliſh* Gardens.

Theſe Plants are all propagated by planting their Cuttings in a Bed of light freſh Earth, during any of the Summer Months, which ſhould be water'd and ſhaded until they have taken Root; after which they will require no other Culture than to keep them clear from Weeds until *Michaelmas*; when they ſhould be tranſplanted into a warm Situation, and muſt have a very dry Soil, otherwiſe they are ſubject to decay in Winter, for they are Natives of warm Countries: but if they are plac'd in a dry Rubbiſh, under the Shelter of a Wall or Pale, they will endure the Cold of our ordinary Winters very well. Theſe Plants produce their Flowers in *June* and *July*, but do rarely perfect their Seeds in this Country. Their Flowers have very little Beauty in them; but for their hoary Leaves, and odd Appearance, a few Plants of them may be admitted for Variety. The ſecond Sort is us'd in Medicine.

POLYANTHOS; *vide* Primula Veris.

POLYGALA; Milk-wort.

The *Characters* are;

It hath a Flower conſiſting of one Leaf, of an anomalous Figure, perforated behind, but divided into two Lips before; the uppermoſt Lip is divided into two Parts, but the under one is curiouſly fringed; out of the *lower Part of the Flower riſes the Pointal, which afterwards becomes a broad Fruit, divided into two Cells, which contain oblong Seeds, the Fruit is generally encloſ'd in the Flower-cup which is compoſ'd of five Leaves,* viz. *three ſmall ones, and two larger, which afterwards embrace the Fruit like Wings.*

The *Species* are;

1. POLYGALA; *major, cærulea, Tabern.* Greater blue Milkwort.

2. POLYGALA; *major, alba. Tabern.* Greater white Milkwort.

3. POLYGALA; *vulgaris. C. B. P.* Common Milkwort, with a blue Flower.

4. POLYGALA; *alba Tabern.* White common Milkwort.

5. POLYGALA; *Africana fruteſcens, folio buxi, flore maximo. Oldenl.* Shrubby African Milkwort, with a Box-leaf, and a very large Flower.

The four firſt *Species* are found wild in moiſt Meadows in divers Parts of *England*, and are never preſerv'd in Gardens, except for the Sake of Variety: However, I thought proper to inſert them in this Place, to introduce the fifth Sort, which is a beautiful Plant, and is worthy to be preſerv'd in all curious Collections of rare Plants.

This is propagated by Seeds, which ſhould be ſown upon a moderate Hot-bed in the Spring; and when the Plants are come up, they ſhould be prick'd into ſmall Pots, fill'd with light rich Earth, and plung'd into another Hot-bed, where they ſhould be ſhaded until they have taken Root, and often refreſh'd with Water; after which they muſt have Air given them in Proportion to the Warmth of the Seaſon, and in *July* they may be remov'd into the open Air, placing them in a warm Situation, where they may be ſhelter'd from ſtrong Winds, and in dry Weather they muſt be often refreſh'd with Water: In this Place they may remain until *October*, when the Nights begin to be froſty; then you ſhould remove them into the Green-Houſe, placing them where they may have the Advantage of the free Air, when the Weather is favourable enough to admit of the Glaſſes being open'd, for they only require to be protected from Froſt: During the Winter Seaſon, they ſhould often be refreſh'd with Water, but it ſhould not be given to them in large Quantities, which will injure their Roots: In Summer, they may be expoſ'd with *Myrtles*, *Geraniums*, &c. in a Situation where they are defended from ſtrong Winds; and as their Roots increaſe, ſo the Size of their Pots ſhould be inlarg'd; but you muſt be very cautious not to over-pot them, which is injurious to all ſorts of *Exotick* Plants.

The Earth in which theſe Plants are ſet, ſhould be rich, freſh, and light, in which they will thrive exceedingly, and continue in Flower moſt part of the Year, which renders it very valuable, and if the Seaſon proves favourable, the Seeds will ripen very well; but you muſt be careful to gather them when ripe, otherwiſe they will drop off and be loſt.

POLYGONATUM; Solomon's-Seal.

The *Characters* are;

The Flower conſiſts of one Leaf, is tuberoſe, and expands at the Top in Shape of a Bell, and is divided into ſeveral Segments; the Ovary, which is ſituated in the Center of the Flower, becomes a ſoft globular Fruit, containing roundiſh Seeds.

The *Species are;*

1. POLYGONATUM; *latifolium, vulgare. C. B. P.* Common Broad-leav'd Solomon's-Seal.

2. Polygonatum; *latifolium, vulgare, caulibus rubentibus. H. L.* Common broad-leav'd Solomon's-Seal, with red Stalks.

3. Polygonatum; *latifolium, minus, flore majore. C. B. P.* Leſſer broad-leav'd Solomon's-Seal, with a larger Flower.

4. Polygonatum; *latifolium, flore duplici odoro. H. R. Par.* Broad-leav'd Solomon's-Seal, with a double ſweet-ſmelling Flower.

There are ſeveral other *Species* of this Plant, which are preſerv'd in *Botanick* Gardens for Variety; but thoſe here mention'd are the principal Sorts cultivated in *England.*

Theſe Plants are eaſily propagated by parting of their Roots in the Spring before they begin to ſhoot, obſerving always to preſerve a Bud to each Off-ſet: They ſhould be planted in a freſh light Earth, where they will thrive exceedingly; but if it be over rich, it will deſtroy their Roots. The firſt Sort is the moſt common in *England,* and is what the College has directed for Medicinal Uſe.

POLYPODIUM; Polypody.

The *Characters* are;

It is a Capillary Plant, with oblong jagged Leaves, having a middle Rib, which joins them to the Stalks running through each Diviſion.

The *Species* are;

1. Polypodium; *vulgare. C. B. P.* Common *Polypody.*

2. Polypodium; *majus ſerrato folio. Barr. Icon.* Greater *Polypody,* with a ſerrated Leaf.

3. Polypodium; *Cambro-Britannicum, pinnulis ad margines laciniatis. Raii. Syn.* Welſh *Polypody,* with laciniated Leaves.

There are ſeveral other *Species* of this Plant, which are preſerv'd in ſome curious *Botanick* Gardens for Variety; but as they are rarely cultivated in other Gardens, ſo it is not worth while to enumerate them in this Place.

The firſt Sort is that which is us'd in Medicine, and is found growing upon old Walls and ſhady Banks in divers Parts of *England.* The ſecond ſeems to be only a Variety of the firſt, which differs therefrom in being larger, and having ſerrated Leaves. The third Sort was brought from *Wales,* where it grows in great Plenty, and is the moſt beautiful of all the Sorts. Theſe Plants may be propagated by parting of their Roots in the Spring before they ſhoot, and ſhould be planted in a very poor moiſt Soil under the Shade of a Wall, for if they are expos'd to the Sun, they will not thrive: They chiefly delight to grow out of the Joints of Walls, and old Buildings, but are commonly found expos'd to the North.

POMEGRANATE; *vide* Punica.

POMUM ADAMI; *vide* Aurantium.

POPULAGO; Marſh Mary-gold.

The *Characters* are;

The Flowers conſiſts of ſeveral Leaves, which are plac'd circularly, and expand in Form of a Roſe, *in the Middle of which riſes the Pointal, which afterwards becomes a membranaceous Fruit, in which there are ſeveral Cells, (which are for the moſt part bent downwards) collected into little Heads, and are full of oblong Seeds.*

The *Species* are;

1. Populago; *flore majore. Tourn.* Marſh Marygold, with a larger Flower.

2. Populago; *flore minore. Tourn.* Marſh-Marygold, with a ſmaller Flower.

3. Populago; *flore pleno. Tourn.* Marſh-Marygold, with a double Flower.

The two firſt Sorts are very common on boggy and watry Places in divers Parts of *England*, and are ſeldom cultivated in Gardens: But the third Sort, which is a Variety from the ſecond, is preſerv'd in Gardens for its fine double Flowers.

This Plant is propagated by parting of the Roots in Autumn, and muſt be planted on a moiſt Soil, otherwiſe the Flowers will not be near ſo fair, nor will the Plants thrive. Theſe are very proper to place in very wet Parts of the Garden, where few other Plants will thrive, and will afford an agreeable Variety during their Seaſon of Flowering, which is from the Middle of *April* until the latter End of *May*; ſo that they are worthy of a Place in every curious Flower-Garden.

POPULUS; the Poplar-Tree.

The *Characters* are;

The Leaves are broad, and for the moſt part angular; the Male Trees produce amantaceous Flowers, which have many little Leaves and Apices, but are barren: The Female Trees produce membranaceous Pods, which open into two Parts, containing many Seeds, which have a large Quantity of Down adhering to them, and are collected into Spikes.

The *Species* are;

1. Populus; *alba, minoribus foliis. C. B. P.* White *Poplar*, with ſmaller Leaves.

2. Populus; *alba, majoribus foliis. C. B. P.* White *Poplar*, with large Leaves, *commonly call'd*, The Abele-Tree.

3. Populus; *tremula. C. B. P.* The Trembling *Poplar*, or Aſpen-Tree.

4. Populus; *nigra. C. B. P.* The Black *Poplar-Tree, by ſome falſly call'd*, The Cotton-Tree.

5. Populus; *alba, folio minore, variegato.* The white *Poplar*, with ſtrip'd Leaves.

Theſe Trees may be propagated either from Layers or Cuttings, which will readily take Root, as alſo from Suckers, which the white *Poplars* ſend up from their Roots in great Plenty. The beſt Time for traſplanting theſe Suckers, is in *October*, when their Leaves begin to decay. Theſe may be plac'd in a Nurſery for two or three Years, to get Strength, before they are planted out where they are deſign'd to remain: But if you intend to propagate them from Cuttings, it is better to defer the doing of that until *February*; at which time you may plant Truncheons of four or five Feet long, thruſting them about a Foot into the Ground: Theſe will readily take Root, and if the Soil be moiſt in which they are planted, will arrive to a conſiderable Bulk in a few Years.

The black *Poplar* is not ſo apt to take Root from large Truncheons, therefore 'tis the better Method, to plant Cuttings about a Foot and a half in Length, thruſting them a Foot deep into the Ground: Theſe will take Root very freely, and may be afterwards tranſplanted where they are to remain. This Sort will grow upon almoſt any Soil, but will thrive beſt in moiſt Places.

I have planted Cuttings of this Tree, which in four Years, have been bigger in the Trunk than a Man's Thigh, and near twenty Feet in Height, and this upon a very indifferent Soil; but in a moiſt Soil, it is common for theſe Trees to ſhoot twelve or fourteen Feet in a Seaſon: So that where a Perſon hath a mind to make a Shelter in a few Years, there is ſcarce any Tree ſo proper for that Purpoſe as this: But they ſhould not be planted too near the Pleaſure-Garden, becauſe the Down which falls from theſe Trees will make a prodigious Litter.

The White Sorts, as alſo the *Aſpen-Tree*, do alſo cauſe a great Litter in the Spring, when their Down falls off; and their Roots being very apt to produce a large Quantity of Suckers, renders them unfit to be planted near an Houſe or Garden; but when they are interſpers'd with other Trees in large Plantations, they afford an agreeable Variety; their Leaves being very white on their Underſides, which when blown with the Wind, are turn'd to Sight.

A conſiderable Advantage may be obtain'd by planting theſe Trees upon moiſt boggy Soils, where few other Trees will thrive: Many ſuch Places there are in *England*, which do not, at preſent, bring in much Money to their Owners; whereas if they were planted with theſe Trees, they would, in a very few Years, over-purchaſe the Ground, clear of all Expence: But there are many Perſons in *England*, who think nothing, except Corn, worth cultivating: or if they plant Timber, it muſt be *Oak*, *Aſh*, or *Elm*; and if their Land be not proper for either of theſe, it is deem'd little worth; whereas if the Nature of the Soils was examin'd, and proper Sorts of Plants adapted to them, there might be very great Advantage made of ſeveral large Parcels of Land, which at this time lie neglected.

The Wood of theſe Trees, eſpecially of the *Abele*, is very good to lay for Floors, where it will laſt many Years; and for its exceeding Whiteneſs, is, by many Perſons preferr'd to *Oak*; it is alſo very proper for Wainſcoting of Rooms, being leſs ſubject to ſwell or ſhrink than moſt other Sorts of Wood: But for Turnery Ware, there is no Wood equal to this for its exceeding Whiteneſs, ſo that *Trays*, *Bowls*, and many other Utenſils are made of it; and the Bellows-makers prefer it for their Uſe; as do alſo the Shoemakers, not only for Heels, but alſo for the Soles of Shoes: It is alſo very good to make light Carts; and the Poles are very proper to ſupport *Vines*, *Hops*, &c. and the Lopping will afford good Fuel, which in many Countries is much wanted.

PORRUM; Leek.

The *Characters* are;

The Flower conſiſts of ſix Petals, and is ſhap'd, as it were, like a Bell; in the Center ariſes the Pointal, which afterwards becomes a roundiſh Fruit, divided into three Cells, which contain roundiſh Seeds: To theſe Notes muſt be added, The Stamina *are generally broad, and flat, ending in three Capillaments; of which the middle one is furniſh'd with a Chive; the Flowers are alſo gather'd into almoſt globular Bunches; the Roots are long, cylindrical, and coated; the Coats ending in plain Leaves.*

The *Species* are;

1. Porrum; *commune capitatum.* C. B. P. The common Leek.
2. Porrum; *ſectivum, latifolium.* C. B. P. Broad-leav'd Leek, *commonly call'd*, The London Leek.

There are ſome other *Species* of this Plant, which grow wild in the South of *France* and *Spain*, but as they are ſeldom cultivated in Gardens, ſo I ſhall forbear to mention them here. The two Sorts here mention'd, are by many Perſons affirm'd to be the ſame, both of them riſing from the ſame Seed; but this is what the Gardeners near *London* will not believe, for they never ſow the Seeds of the latter, if they can procure thoſe of the firſt Sort, there being a great Difference in the Size of the Head, or principal Part of the Leek; but whether by long cultivating they may not alter, I cannot poſitively affirm, having never ſown the Seeds of the latter Sort above one Year.

Theſe Plants are cultivated by ſowing their Seeds in the Spring, in the ſame manner as was directed for *Onions*, with which theſe are commonly ſown, the two Sorts of Seeds being mix'd according to the Proportion which is deſir'd of either Sort; tho' the moſt common Method is, to mix an equal Quantity of both, for the *Onions* will greatly out-grow the *Leeks* in the Spring; but theſe being drawn off in *July*, the *Leeks* will have time to grow large afterwards, ſo that there may be a moderate Crop of both Sorts. The Management of *Leeks* being exactly the ſame with *Onions*, I ſhall not repeat it in this Place. but ſhall only add, that many Perſons do ſow their *Leeks* very thick in Beds in the Spring; and in *June*, after ſome of their early Crops are taken off, they dig up the Ground and plant their *Leeks* out thereon, in Rows a Foot apart, and ſix Inches aſunder in the Rows, obſerving to water them until they have taken Root; after which they will require no farther Culture, but to clear the Ground from Weeds: The *Leeks* thus planted, will grow to a great Size, provided the Ground be good; and this Method is very proper for ſuch Perſons who have little Room.

If you would ſave the Seeds of this Plant, you ſhould make Choice of ſome of the largeſt and beſt you have, which muſt remain in the Place where they grew, till *February*; when they ſhould be tranſplanted in a Row againſt a warm Hedge, Pale or Wall, at about eight Inches aſunder; and when their Stems advance, they ſhould be ſupported by a String, to prevent their being broke down, to which they are very liable, eſpecially when in Head, and the cloſer they are drawn to the Fence, in Autumn, the better the Seeds will ripen; for it ſometimes happens, in cold Summers or Autumns, that thoſe which grow in the open Garden, do not perfect their Seeds in this Country, eſpecially if there ſhould be ſharp Froſts early in Autumn, which will intirely ſpoil the Seed.

When it is ripe, (which may be known by the Heads changing brown,) you ſhould cut off their Heads with about a Foot or more of the Stalk to each, and tie them in Bunches, three or four Heads in each, and hang them up in a dry Place, where they may remain till *Chriſtmas*, or after, when you may thraſh out the Seeds for Uſe. The Husk of their Seeds is very tough, which renders it very difficult to get out the Seeds, therefore ſome Perſons who have but a ſmall Quantity, do rub it hard againſt a rough Tile, which will break the Husks, and get the Seeds out better than moſt other Methods I have known uſed.

PORTULACA: Purſlane.

The *Characters* are,

The Flower conſiſts of many Leaves, which expand in Form of a Roſe; *out of whoſe Flower-cup which conſiſts of one Leaf ariſes the Pointal, which, together with the Flower-cup becomes a Fruit for the moſt part Oval, full of ſmall Seeds, and furniſhed with two Leaves or Husks at top; of which the outer one, which was the Part of the Flower-cup that was ſplit in* *in two, opens firſt; and the inner one, which is the Pointal enlarg'd, opens laſt, doubly and tranſverſly, while the lower Part of the Flower-cup adheres to the Foot-ſtalk.*

The *Species* are;

1. Portulaca; *latifolia, ſeu ſativa. C. B. P.* Broad-leav'd *or* Garden Purſlane.

2. Portulaca; *ſativa, latifolia, foliis flavis. Mor. Hiſt.* Broad-leav'd Garden Purſlane, with yellow Leaves.

3. Portulaca; *anguſtifolia, ſive ſylveſtris. C. B. P.* Narrow-leav'd *or* Wild Purſlane.

4. Portulaca; *Curaſſavica, folio capparidis. Par. Bat.* Purſlane from Curaſſo, with a Caper-leaf.

The firſt Sort here mention'd, is what the Gardeners near *London* do chiefly cultivate; though the ſecond Sort does very often come up mix'd with the firſt; but whether it is only an accidental Variety ariſing from the ſame Seeds, or that the Seeds are promiſcuouſly ſav'd, I can't determine: Indeed, there is no other Difference between them, but only the Colour of their Leaves, ſo that they are both equally good for Uſe; but the green Sort having a better Appearance, is generally preferr'd in the Markets.

The wild Sort is not a Native of *England*, but grows plentifully in many warm Countries; where when it has once obtain'd ſo as to ſhed its Seeds, 'tis difficult to extirpate again. This is ſeldom us'd, though 'tis not different from the Garden-kind, except in the Smallneſs of its Leaves.

The fourth Sort is very common in moſt of the warm Parts of *America*, where it grows in great Plenty upon the Shores and Rocks near the Sea. This is preſerv'd in ſome curious Gardens for Variety, but is a Plant of no great Beauty.

Purſlane is propagated from Seeds, which may be ſown upon Beds of light rich Earth, during any of the Summer Months; but if you intend to have it early in the Seaſon, it ſhould be ſown upon a Hot-bed, for it is too tender to be ſown in the open Air before *April*, and then it muſt be in a warm Situation. This Seed is very ſmall, ſo that a little of it will be ſufficient to ſupply a Family. There is no other Culture which this Plant requires, but to keep it clear from Weeds, and in dry Weather to water it twice or three times a Week. In warm Weather this Plant will be fit for Uſe in ſix Weeks after ſowing; ſo that in order to continue a Succeſſion of this Plant, you ſhould ſow it at three or four different Seaſons, allowing a Fortnight between each Sowing, which will be ſufficient to laſt the whole Seaſon, while it is proper to be eaten; for it being of a very cold Nature, it is unſafe to be eaten, except in the Heat of Summer, in *England*; for which Reaſon, it is not to any Purpoſe to ſow it upon a Hot-bed, ſince it will come early enough for Uſe in the open Air.

PRIMULA VERIS: Primroſe.

The *Characters* are;

The Flower conſiſts of one Leaf; the lower Part of which is tubuloſe, but the upper Part expands itſelf flat in Form of a Salver, and is cut into ſeveral Segments; from the Flower-cup (which is fiſtulous) ariſes the Pointal; which, when the Flower is decay'd, becomes an oblong Fruit or Husk, lying almoſt conceal'd in the Flower-cup, and opens at the Top, in which is contain'd many roundiſh Seeds faſten'd to the Placenta.

The *Species* are;

1. Primula Veris; *vulgaris. Park.* Common *Primroſe.*

2. Primula Veris; *Conſtantinopolitana, flore albo. Tourn. Primroſe* of Conſtantinople, with a white Flower, *commonly call'd,* The Paper-white *Primroſe.*

3. Primula Veris; *Conſtantinopolitana, flore dilute carneo. Tourn. Primroſe* of Conſtantinople, with a pale fleſh-colour'd Flower.

4. Primula Veris; *Conſtantinopolitana, flore dilute purpureo. Tourn. Primroſe* of Conſtantinople, with a pale purple Flower.

5. Primula Veris; *Conſtantinopolitana, flore albo duplici. Primroſe* of Conſtantinople, with a double white Flower, *commonly call'd,* The Double Paper-white *Primroſe.*

6. Primula Veris; *vulgaris, flore dilute purpureo.* Common *Primroſe,* with a pale-purple Flower.

7. Primula Veris; *vulgaris flore pleno.* Common *Primroſe,* with a very double Flower.

8. Primula Veris; *vulgaris, flore pleno, dilute rubente.* Common *Primroſe,* with a double pale-red Flower.

9. Primula Veris; *pallido flore, elatior. Cluſ.* Common Pagils, *or* Cowſlips.

10. Primula Veris; *umbellata, odorata, pratenſis.* Great Cowſlips *or* Oxſlips.

11. Primula Veris; *geminato flore. H. Eyſt.* Double Cowſlip, *or* Hoſe in Hoſe.

12. Primula Veris; *caulifera, flore luteo pleno, odorato. J. B.* Cowſlip *or* Pagil, with a very double Flower.

13. Primula Veris; *hortenſis, umbellata, caule & flore folioſo, coccineo majore. H. L.* Garden *Primroſe* or Polyanthus, with a large red Flower.

14. Primula Veris; *umbellata, odorata, hortenſis, ſimplicis, varietas uberrima pro varietate jucundiſſima coloris multiplicis. Boerh. Ind.*

There are a great Variety of the Garden *Primroſes* or *Polyanthus's,* which are annually produc'd from Seeds; the Flowers of which are ſo beautifully ſtrip'd, and ſome of them have a great Number of Flowers upon a Stalk, ſo that they equal the *Auricula's* in the Beauty of their Flowers; and as they require but little Culture, ſo they have, in many Gardens, obtain'd the Preference to moſt other Spring Flowers.

The firſt Sort of *Primroſe* grows wild in Woods and other ſhady Places in moſt Parts of *England,* from whence their Roots may be eaſily tranſplanted into the Garden; where, if they are plac'd under Hedges, and in ſhady Walks, they make a beautiful Appearance early in the Spring, when few other Plants are in Flower.

The beſt Time to tranſplant them is at *Michaelmas,* that their Roots may have Strength to produce their Flowers early in the Spring. Theſe delight in a ſtrong rich Soil, but will grow in almoſt any ſort of Earth, provided they have a ſhady Situation.

The ſixth, ſeventh and eighth Sorts are Varieties of the firſt, which have been accidentally produc'd from Seeds: Theſe may be propagated by parting of their Roots at *Michaelmas,* and muſt be treated as the common Sort.

The ninth and tenth Sorts, do alſo grow wild in the Meadows in divers Parts of *England,* the Roots of which are often tranſplanted into Gardens; where, if they are intermix'd with other early flowering Plants, they afford an agreeable Variety.

The eleventh and twelfth Sorts are Varieties which were produc'd from Seeds of the former; but the laſt is, at preſent, very rare in *England*. Theſe may be propagated by parting their Roots at *Michaelmas*, and ſhould be planted on a ſtrong Soil, and expos'd to the Morning-Sun.

The ſeveral Varieties of *Polyanthus's* are produc'd by ſowing of Seeds, which ſhould be ſav'd from ſuch Flowers as have good Properties, *i. e.* ſuch as have large upright Stems, producing many Flowers upon a Stalk, the Flowers large, beautifully ſtrip'd, and that open flat: From the Seeds of ſuch Flowers, there is room to hope for a great Variety of good Sorts.

Theſe Seeds ſhould be ſown in Boxes fill'd with light rich Earth, in *December*, being very careful not to bury the Seed to deep, for if it be only cover'd with light Earth it will be ſufficient: Theſe Boxes ſhould be plac'd where they may receive the Benefit of the Morning-Sun until ten of the Clock, but muſt by no means be expos'd to the Heat of the Day, eſpecially when the Plants begin to appear, for at that time one whole Day's Sun will intirely deſtroy them: In the Spring, if the Seaſon ſhould prove dry, you muſt often refreſh them with Water; and as the Heat increaſes, ſo you ſhould remove the Boxes more in the Shade, for the Heat is very injurious to them.

In *May* theſe Plants will be ſtrong enough to plant out; at which time you ſhould prepare ſome ſhady Borders, which ſhould be made rich; upon which you muſt ſet the Plants about four Inches aſunder, obſerving to water them until they have taken Root; after which they will require no farther Care but to keep them clear from Weeds, until the latter End of *Auguſt* following; when you ſhould prepare ſome Borders, which are expos'd to the Eaſt, with good light rich Earth, into which you muſt tranſplant your *Polyanthus's*, placing them ſix Inches aſunder equally in Rows, obſerving, if the Seaſon proves dry, to water them until they have taken Root. In theſe Borders your Plants will flower the ſucceeding Spring; at which time you muſt obſerve to mark ſuch of them which are fine, to preſerve, and the reſt may be tranſplanted into Wilderneſſes, and other ſhady Places in the Garden; where, although they are not very valuable Flowers, they will afford an agreeable Variety.

Thoſe which you intend to preſerve, may be removed ſoon after they have done flowering (provided you do not intend to ſave Seeds from them) and may be then parted and tranſplanted into a freſh Border of the like rich Earth, allowing them the ſame Diſtance as before; obſerving alſo to water them until they have taken Root, after which they will roquire no farther Care, but only to keep them clean from Weeds; and the following Spring they will produce ſtrong Flowers; and if the Kinds are good, will be little inferior to a Shew of *Auricula*'s.

Theſe Roots ſhould be conſtantly removed and parted every Year, and the Earth of the Border changed, otherwiſe they will degenerate and loſe the greateſt Part of their Beauty.

If you intend to ſave Seeds, which is the Method to obtain a great Variety, you muſt mark ſuch of them, which, as I ſaid before, have good Properties: Theſe ſhould be, if poſſible, ſeparated from all ordinary Flowers, for if they ſtand ſurrounded with plain-colour'd Flowers, they will impregnate each other, whereby the Seeds of the valuable Flowers will not be near ſo good, as if the Plants had been in a ſeparate Border where no ordinary Flowers grew; therefore the beſt Way is to take out the Roots of ſuch as you do not eſteem, ſo ſoon as the Flowers open, and plant them in another Place, that there may be none left in the Border, but ſuch as you would chuſe for Seeds.

The Flowers of theſe ſhould not be gathered, except ſuch as are produced ſingly upon Pedicles, leaving all ſuch as grow in large Bunches; and if the Seaſon ſhould prove dry, you muſt now and then refreſh them with Water, which will cauſe their Seeds to be larger and in greater Quantity, than if they were intirely neglected. Towards the latter End of *May* the Seed will be ripe, which may be eaſily known by the Pods changing brown and opening; ſo that you ſhould at that Time look over it three times a Week, gathering each time ſuch of it as is ripe, which ſhould be laid upon a Paper to dry, and may then be put up until the Seaſon of ſowing.

PRIMROSE-TREE; *vide* Onagra.

PRIVET; *vide* Liguſtrum.

PRUNING OF TREES: There is not any Part of Gardening, which is of more general Uſe than that of *Pruning*; and yet it is very rare to ſee Fruit-Trees skilfully manag'd; almoſt every Gardener will pretend to be a Maſter of this Buſineſs, though there are but few who rightly underſtand it; nor is it to be learn'd by Rote, but requires a ſtrict Obſervation of the different manners of Growth of the ſeveral Sorts of Fruit Trees; ſome requiring to be manag'd one way, and others muſt be treated in a quite different Method, which is only to be known from carefully obſerving how each Kind is naturally diſpos'd to produce its Fruit: For ſome Sorts do produce their Fruit on the ſame Year's Wood, as *Vines*; others produce their Fruit, for the moſt part, upon the former Year's Wood, as *Peaches*, *Nectarines*, &c. and others upon Curſons or Spurs, which are produced upon Wood of three, four, or five Years old, as *Plumbs*, *Pears*, *Cherries*, &c. therefore in order to the right Management of Fruit-Trees, there ſhould always be Proviſion made to have a ſufficient Quantity of bearing Wood, in every Part of the Trees, and at the ſame Time, there ſhould not be a Superfluity of uſeleſs Branches, which would exhauſt the Strength of the Trees, and cauſe them to decay in a few Years.

The Reaſons which have been laid down for *Pruning* of Fruit-Trees, are as follow; Firſt, to preſerve Trees longer in a vigorous bearing State; the ſecond is, to render the Trees more beautiful to the Eye; and thirdly, to cauſe the Fruit to be larger and better taſted.

1. It preſerves a Tree longer in a healthy bearing State, by *Pruning* off all ſuperfluous Branches, whereby there are no more left upon the Tree than is neceſſary, or that the Roots can nouriſh kindly; ſo that the Root is not exhauſted in ſupplying uſeleſs Branches, which muſt afterwards be cut out, and thereby conſequently much of the Sap expended to no Purpoſe.

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The Reaſons for *Pruning* being thus exhibited, the next Thing is the Method of performing it; but this being fully handled under the ſeveral Articles of the different Kinds of Fruit, I ſhall not repeat it again in this Place, and therefore ſhall only add ſome few general Inſtructions, which are neceſſary to be underſtood, in order to the right Management of Fruit-Trees.

There are many Perſons who ſuppoſe, that if their Fruit-Trees are but kept up to the Wall or Eſpalier, during the Summer-ſeaſon, ſo as not to hang in very great Diſorder, and in Winter to get a Gardener to *prune* them, it is ſufficient: But this is a very great Miſtake; for the greateſt Care ought to be employed about them in the Spring, when the Trees are in vigorous Growth; which is the only proper Seaſon, to procure a Quantity of good Wood in the different Parts of the Tree, and to diſplace all uſeleſs Branches, ſo ſoon as they are produced, whereby the Vigour of the Tree will be intirely diſtributed to ſuch Branches only, as are deſign'd to remain, which will render them ſtrong, and more capable to produce good Fruit; whereas, if all the Branches are permitted to remain, which are produced, ſome of the more vigorous will attract the greateſt Share of the Sap from the Tree, whereby they will be too luxuriant for producing Fruit, and the greateſt Part of the other Shoots will be ſtarved, and rendered ſo weak, as not to be able to produce any thing elſe but Bloſſoms and Leaves (as hath been beforementioned)

mentioned) ſo that it is impoſſible for a Perſon, let him be ever ſo well skill'd in Fruit-Trees, to reduce them into any tolerable Order by *Winter-pruning* only, if they are wholly neglected in the Spring.

There are others, who do not intirely neglect their Trees during the Summer Seaſon, as thoſe before-mentioned; but yet do little more good to them by what they call *Summer-pruning*; for theſe Perſons neglect their Trees at the proper Seaſon, which is in *May*, when their Shoots are produced, and do only about *Midſummer* go over them, nailing in all their Branches, except ſuch as are produced foreright from the Wall, which they cut out; and at the ſame time do often ſhorten moſt of the other Branches; all which is intirely wrong Practice; for thoſe Branches which are intended for bearing the ſucceeding Year, ſhould not be ſhortened during the Time of their Growth, which will cauſe them to produce two lateral Shoots from the Eyes below the Place where they were ſtopp'd, which Shoots will draw much of the Strength from the Buds of the firſt Shoot, whereby they are often flat, and do not produce their Bloſſoms; and if thoſe two lateral Shoots are not intirely cut away at the *Winter-pruning*, they will prove injurious to the Tree. And in this Method, ſuffering thoſe luxuriant Shoots to remain upon the Tree until *Midſummer* before they are diſplaced, they will exhauſt a great Share of the Nouriſhment from the other Branches (as was before obſerved) and by ſhading the Fruit all the Spring Seaſon, when they are cut away, and the other Branches faſtened to the Wall, the Fruit by being ſo ſuddenly expoſed, will receive a very great Check, which will cauſe their Skins to grow tough, and thereby render them leſs delicate. This is to be chiefly underſtood of Stone-Fruit and *Grapes*; but *Pears* and *Apples* being much hardier, do not ſuffer ſo much, thought it is a great Diſadvantage to thoſe alſo to be thus managed.

It muſt alſo be remark'd, that *Peaches*, *Nectarines*, *Apricocks*, *Cherries* and *Plumbs*, are always in the greateſt Vigour, when they are the leaſt maim'd by the Knife; for where theſe Trees have large Amputations, they are very ſubject to gum and decay; ſo that it is certainly the moſt prudent Method, carefully to rub off all uſeleſs Buds when they are firſt produced, and pinch others, where new Shoots are wanted to ſupply the Vacancies of the Wall; by which Management Trees may be ſo ordered, as to want but little of the Knife in *Winter-Pruning*, which is the ſureſt Way to preſerve theſe Trees healthful, and is perform'd with leſs Trouble than the common Method.

The Management of *Pears* and *Apples*, is much the ſame with theſe Trees in Summer, but in Winter they muſt be very differently *pruned*; for as *Peaches* and *Nectarines* do, for the moſt part, produce their Fruit upon the former Year's Wood, and therefore muſt have their Branches ſhortened according to their Strength, in order to produce new Shoots for the ſucceeding Year; ſo *Pears* and *Apples*, on the contrary, producing their Fruit upon *Curſons* or *Spurs*, which come out of the Wood of five, ſix or ſeven Years old; ſhould not be ſhortened, becauſe thereby thoſe Buds which were naturally diſpoſed to form

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nly give ſome general Hints for the *Pruning* of Standard Fruit-Trees, and ſo conclude.

Firſt, you ſhould never ſhorten the Branches of theſe Trees, unleſs it be where they are very luxuriant, and grow irregular on one Side of the Tree, attracting the greateſt Part of the Sap of the Tree, where the other Parts are unfurniſhed with Branches, or are rendred very weak; in which Caſe the Branch ſhould be ſhortened down ſo low, as is neceſſary, in order to obtain more Branches, to fill up the Hollow of the Tree; but this is only to be underſtood of *Pears* and *Apples*, which will produce Shoots from Wood of three or four Years old; whereas moſt Sorts of Stone-Fruit will gum and decay, after ſuch Amputations.

But from hence I would not have it underſtood, that I would direct the reducing of theſe Trees into an exact ſpherical Figure, ſince there is nothing more deteſtable, than to ſee a Tree (which if permitted to grow as it is naturally diſpos'd, with its Branches produced at proportionable Diſtances, according to the Size of the Fruit) by endeavouring to make it exactly regular in its Head, ſo crowded with ſmall weak Branches, as to prevent the Air from paſſing between them; which will render it incapable to produce Fruit; all that I intend by this ſtopping of luxuriant Branches, is only when one or two ſuch happen on a young Tree, where they intirely draw all the Sap from the weaker Branches and ſtarve them; and then it is proper to uſe this Method, which ſhould be done in time, before they have exhauſted the Roots too much.

Whenever this happens to Stone-Fruit, which ſuffer much more by cutting than the former Sorts, it ſhould be remedied by ſtopping or pinching thoſe Shoots in the Spring, before they have obtained too much Vigour; which will cauſe them to puſh out Side-branches, whereby the Sap will be diverted from aſcending too faſt to the leading Branch; (as hath been directed for Wall-Trees) but this muſt be done with Caution, as before.

You muſt alſo cut out all dead or decaying Branches, which cauſe their Heads to look very ragged, eſpecially at the Time when the Leaves are upon the Tree, theſe being deſtitute of them, have but a deſpicable Appearance; beſides, theſe do attract noxious Particles from the Air, which are injurious to the Trees; therefore the ſooner they are cut out, the better; in doing of this, you ſhould obſerve to cut them cloſe down to the Place where they were produced, otherwiſe that Part of the Branch left will decay and prove equally hurtful to the Tree; for it ſeldom happens that when a Branch begins to decay, that it does not die quite down to the Place where it was produced, and if permitted to remain long uncut, does often infect ſome of the other Parts of the Tree. If the Branches are large which you cut off, it will be very proper, after having ſmoothed the cut Part exactly even with a Knife, Chiſſel or Hatchet, to put on a Plaiſter of grafting Clay, which will prevent the Wet from ſoaking into the Tree, at the wounded Part.

All ſuch Branches which run croſs each other, ſhould alſo be cut out; for theſe not only occaſion a Confuſion in the Head of the Tree, but by lying over each other, do rub off their Bark by their Motion, and very often occaſion them to canker, to the great Injury of the Tree; and on old Trees (eſpecially *Apples*) there are often young vigorous Shoots produced from the old Branches near the Trunk, which grow upright into the Head of the Trees; theſe therefore ſhould carefully be cut out every Year, leſt by being permitted to grow, they fill the Tree too full of Wood, which ſhould always be guarded againſt, ſince it is impoſſible for ſuch Trees to produce ſo much, or ſo good Fruit, as thoſe Trees, whoſe Branches grow at a farther Diſtance, whereby the Sun and Air do freely paſs between them, in every Part of the Tree.

Theſe are all the general Directions which are proper to be given in this Place, ſince not only the particular Methods, but alſo the proper Seaſons for *Pruning* all the different Kinds of Fruit, are fully exhibited under their ſeveral Articles.

PRUNUS; The Plumb-Tree.

The *Characters* are;

The Flower conſiſts of five Leaves, which are placed in a circular Order, and expand in form of a Roſe; *from whoſe Flower-cup riſes the Pointal, which afterwards becomes an oval or globular Fruit, having a ſoft fleſhy Pulp, ſurrounding a hard oblong Stone, for the moſt part pointed*; *to which ſhould be added, The Foot-ſtalks are long and ſlender, and have but a ſingle Fruit upon each.*

The *Species* are;

1. Prunus; *fructu parvo præcoci. Tourn.* The Jean-hative, *or* White Primordian. This is a ſmall white Plumb, of a clear yellow Colour, cover'd over with a white Flew, which eaſily wipes off; it is a pretty good Bearer, and for its coming

very

deſerves a Place in eve-
Garden of Fruit. This
Beginning of *July*.
US; *fructu magno, craſſo*
ourn. Damas noir hative,
arly black Damaſk, *com-*
d, The Morocco Plum.
pretty large Plum of a
pe, divided with a Fur-
Middle (like *Peaches*) the
of a dark, black Colour,
ith a light violet Bloom;
s yellow, and parts from
It ripens in the Mid-

NUS; *fructu parvo, dulci*
. Tourn. The little black
lumb. This is a ſmall
nb, cover'd over with a
om; the Juice is richly
he Fleſh parts from the
d it is a good Bearer.
Middle of *July*.
NUS; *fructu magno, dulci,*
o. Tourn. Groſ. Damas Vi-
rs, i. e. Great Damaſk
Tours. This is a pretty
nb, inclining to an oval
e Out-ſide is of a dark
r'd with a Violet Bloom;
is richly ſugar'd, and the
s from the Stone. Ripe
e of *July*.
NUS; *fructu rotundo atro*
he Orleans Plumb. This
o well known to almoſt
ſon, that it is needleſs to
t; it is a very plentiful
which has occaſion'd its
generally planted by thoſe
vho ſupply the Markets
it; but it is an indifferent

NUS; *fructu oblongo, atro-*
The Fotheringham Plum.
t is ſomewhat long, deep-
r'd in the Middle; the
irm, and parts from the

Stone; the Juice is very rich. This ripens about the Middle of *July*.

7. PRUNUS; *fructu nigro, carne dura. Tourn.* The Perdrigon Plum. This is a middle-ſiz'd Plum, of an oval Shape, the Out-ſide is of a very dark Colour, cover'd over with a violet Bloom; the Fleſh is firm and full of an excellent rich Juice; this is greatly eſteem'd by the Curious. Ripe the latter End of *July*.

8. PRUNUS; *fructu magno è violaceo rubente, ſuaviſſimo ſaccharato. Tourn.* The Violet Perdrigon Plum. This is a large Fruit rather round than long, of a blueiſh-red Colour on the Out-ſide; the Fleſh is of a yellowiſh Colour, pretty firm, and cloſely adheres to the Stone; the Juice is of an exquiſite rich Flavour. This ripens the End of *July*.

9. PRUNUS; *fructu ovato, ex albo flaveſcente.* The white Perdrigon Plumb. This is a middling Plumb, of an oblong Figure, the Out-ſide is yellow covered with a white Bloom, the Fleſh is firm and well-taſted, it is a very good Fruit to eat raw, or for Sweet-meats, having an agreeable Sweetneſs mix'd with an Acidity.

10. PRUNUS; *fructu ovato, magno rubente. Tourn.* The Red Imperial Plumb, *ſometimes called,* The Red Bonum Magnum. This is a large oval-ſhap'd Fruit, of a deep red Colour, covered with a fine Bloom; the Fleſh is very dry, and very indifferent to be eaten raw; but is excellent for making Sweet-meats: This is a great Bearer. Ripe the End of *July*.

11. PRUNUS; *fructu ovato, magno flaveſcente. Tourn.* White Imperial, Bonum Magnum; white Holland or Mogul Plum. This is a large oval-ſhap'd Fruit, of a yellowiſh Colour, powdered over with

a white Bloom; the Fleſh is firm, and adheres cloſely to the Stone; the Juice is of an acid Taſte, which renders it unpleaſant to be eaten raw; but it is very good for Baking or Sweet-meats: It is a great Bearer, and is ripe towards the End of *Auguſt*.

12. Prunus; *fructu ovato cæruleo*. The Cheſton Plum. This is a middle-ſiz'd Fruit, of an oval Figure, the Out-ſide is of a dark Blue, powder'd over with a violet Bloom; the Juice is rich, and it is a great Bearer. Ripe the End of *July*.

13. Prunus; *fructu maximo, rotundo flavo & dulci. Tourn. Prune d'Abricot*, i. e. The Apricock Plum. This is a large round Fruit of a yellow Colour on the Out-ſide, powder'd over with a white Bloom; the Fleſh is firm and dry, of a ſweet Taſte, and comes clean from the Stone. This ripens the End of *July*.

14. Prunus; *fructu ſubrotundo, ex rubro & flavo mixto*. The Maitre Claude. This is a middle-ſiz'd Fruit, rather round than long, of a fine mix'd Colour, between Red and Yellow; the Fleſh is firm, and parts from the Stone, and has a delicate Flavour. Ripe the End of *July*.

15. Prunus; *fructu rubente dulciſſimo. Tourn.* La Roche-Courbon, *or* Diapree rouge, *i. e.* the Red Diaper Plum. This is a large round Fruit, of a reddiſh Colour, powder'd over with a violet Bloom; the Fleſh adheres cloſely to the Stone, and is of a very high Flavour; ripe in the Beginning of *Auguſt*.

16. Prunus; *fructu rotundo, flaveſcente*. La Reine Claude, *i. e.* Queen Claudia. This is a ſmall round Fruit, of a yellowiſh Colour, powder'd over with a pearl-colour'd Bloom; the Fleſh is firm and thick, quits the Stone, and its Juice is richly ſugar'd; ripe the Middle of *Auguſt*.

17. Prunus; *fructu rotundo, nigro-purpureo, majori dulci. Tourn.* Myrabolan Plum. This is a middle-ſiz'd Fruit, of a round Shape, the Out-ſide is a dark Purple, powder'd over with a violet Bloom; the Juice is very ſweet; it is ripe the Middle of *Auguſt*.

18. Prunus; *fructu rotundo è viridi flaveſcente, carne dura ſuaviſſimo.* The Green Gage Plum. This is one of the beſt Plums in *England*; it is of a middle Size, round, and of a yellowiſh-green Colour on the Out-ſide; the Fleſh is firm, of a deep green Colour, and parts from the Stone; the Juice has an exceeding rich Flavour; and it's a great Bearer; ripe the End of *July*. This is called *Gros Damas Verd*, i. e. The *Great Green Damask*, in *France*.

18. Prunus; *fructu Amygdalino. Tourn.* Rognon de Coq; *i. e.* Cock's Teſticles. This is an oblong Fruit, deeply furrowed in the Middle, ſo as to reſemble the Teſticles; it is of a whitiſh Colour on the Out-ſide, ſtreak'd with red; the Fleſh of it adheres firmly to the Stone, and it is late ripe.

19. Prunus; *fructu rotundo flavo dulciſſimo.* Drap d'Or, *i. e.* the Cloth of Gold Plum. This is a middle-ſiz'd Fruit, of a bright yellow Colour, ſpotted or ſtreak'd with red on the Outſide; the Fleſh is yellow, and full of an excellent Juice; it is a plentiful Bearer, and ripens about the End of *July*.

20. Prunus; *fructu cerei coloris. Tourn.* Prune de Sainte Catherine, *i. e.* St. Catharine Plum. This is a large oval-ſhap'd Fruit, ſomewhat

flat; the Outſide is of an Amber Colour, powder'd over with a whitiſh Bloom, but the Fleſh is of a bright yellow Colour, is dry and firm, adheres cloſely to the Stone, and has a very agreeable ſweet Taſte. This ripens at the End of *Auguſt*, and is very ſubject to dry upon the Tree, when the Autumn proves warm and dry. This makes fine Sweet-meats; and is a plentiful Bearer.

21. Prunus; *fructu ovato rubente dulci.* The Royal Plum. This is a large Fruit of an oval Shape, drawing to a Point next the Stalk; the Outſide is of a light-red Colour, powder'd over with a whitiſh Bloom; the Fleſh adheres to the Stone, and has a fine ſugary Juice. This ripens the End of *July*.

22. Prunus; *fructu parvo ex viridi flaveſcente. Tourn.* La Mirabelle. This is a ſmall, round Fruit, of a greeniſh Yellow on the Outſide; the Fleſh parts from the Stone, is of a bright yellow Colour, and has a fine ſugary Juice. This is a great Bearer, and ripens the Beginning of *Auguſt*.

23. Prunus; *Brignonienſis, fructu ſuaviſſimo. Tourn.* Prune de Brignole, *i. e.* the Brignole Plum. This is a large, oval-ſhap'd Fruit, of a yellowiſh Colour, mix'd with red on the Outſide; the Fleſh is of a bright yellow Colour, is dry, and of an excellent rich Flavour. This ripens the Middle of *Auguſt*, and is eſteem'd the beſt Plum for Sweetmeats yet known.

24. Prunus; *fructu magno, è violaceo rubente, ſerotino. Tourn.* Imperatrice, *i. e.* the Empreſs. This is a large round Fruit, of a violet-red Colour, very much powder'd with a whitiſh Bloom; the Fleſh is yellow, cleaves to the Stone, and is of an agreeable Flavour. This ripens about the Middle of *September*.

25. Prunus; *fructu ovato, maximo, flavo. Tourn.* Prune de Monſieur, *i. e.* the Monſieur Plum. This is ſometimes called the *Wentworth* Plum. It is a large, oval-ſhap'd Fruit, of a yellow Colour both within and without, very much reſembling the *Bonum Magnum*; but the Fleſh of this parts from the Stone, which the other doth not. This ripens towards the latter End of *Auguſt*, and is very good to preſerve, but the Juice is too ſharp to be eaten raw; it is a great Bearer.

26. Prunus; *fructu majori rotundo, rubro. Tourn.* Prune Cerizette, *i. e.* the Cherry Plum. This Fruit is commonly about the Size of the *Ox-heart Cherry*, is round, and of a red Colour; the Stalk is long, like that of a Cherry, which this Fruit ſo much reſembles, as not to be diſtinguiſhed therefrom at ſome Diſtance. The Bloſſoms of this Tree come out very early in the Spring, and being tender, are very often deſtroy'd by Cold; but it affords a very agreeable Proſpect in the Spring; for theſe Trees are generally cover'd with Flowers, which open about the ſame time as the Almonds, ſo that when they are intermix'd therewith, they make a beautiful Appearance before many other Sorts do put out: But where the Fruit is deſired, they ſhould have a South-Eaſt Wall.

27. Prunus; *fructu albo, oblongiuſculo, acido. Tourn.* The white Pear Plum. This is a good Fruit for Preſerving, but is very unpleaſant if eaten raw; it is very late ripe, and ſeldom planted in Gardens, unleſs for Stocks to bud ſome tender

Sorts of *Peaches* upon, for which Purpoſe it is eſteem'd the beſt amongſt all the Sorts of Plums

28. Prunus; *Mytellinum. Park.* The Muſcle Plumb. This is an oblong, flat Plum, of a dark-red Colour; the Stone is large, and the Fleſh but very thin, and not well taſted, ſo that its chief Uſe is for Stocks, as the former.

29. Prunus; *fructu parvo violaceo.* The St. Julian Plum. This is a ſmall Fruit, of a dark, Violet Colour, powder'd over with a mealy Bloom; the Fleſh adheres cloſely to the Stone, and in a fine Autumn will dry upon the Tree. The chief Uſe of this Plum is for Stocks, to bud the more generous Kinds of Plums and Peaches upon, as alſo for the *Bruxelles* Apricock, which will not thrive ſo well upon any other Stock.

30. Prunus; *ſylveſtris, major. J. B.* The Black Bullace-Tree. This grows wild in the Hedges in divers Parts of *England*, and is rarely cultivated in Gardens.

31. Prunus; *ſylveſtris, fructu majore albo. Raii Syn.* The White Bullace-Tree. This grows wild, as the former, and is ſeldom cultivated in Gardens.

32. Prunus; *ſylveſtris. Ger. Emac.* The Black-thorn, *or* Sloe-Tree. This is very common in the Hedges almoſt every where; the chief Uſe of this Tree is to plant for Hedges, as *White-thorn*, *&c.* and being of quick Growth, is very proper for that Purpoſe.

All the Sorts of *Plums* are propagated by budding or grafting them upon Stocks of the *Muſcle*, *White Pear*, *St. Julian*, *Bonum Magnum*, or any other Sorts of free-ſhooting *Plums*; the Manner of Raiſing theſe Stocks hath been already exhibited under the Article of *Nurſeries*, therefore need not be repeated again in this Place; but I would obſerve, that Budding is much preferable to Grafting, for theſe Sorts of Fruit-Trees, which are very apt to gum, where-ever there are large Wounds made on them.

The Trees ſhould not be more than one Year's Growth from the Bud, when they are tranſplanted, for if they are older, they ſeldom ſucceed ſo well, being very ſubject to canker; or if they do take well to the Ground, commonly produce only two or three luxuriant Branches; therefore it is much more adviſable to chuſe young Plants.

The Manner of preparing the Ground (if for Walls) is the ſame as for *Peaches*, as is alſo the pruning the Roots and planting; and therefore I ſhall forbear repeating it again. The Diſtance which theſe Trees ſhould be planted at, muſt not be leſs than fourteen or ſixteen Feet, and if the Wall is low, they ſhould be placed eighteen Feet aſunder.

Plums ſhould have a middling Soil, neither too wet and heavy, nor over light and dry; in either of which Extreams they ſeldom do well: And thoſe Sorts which are planted againſt Walls, ſhould be placed to an Eaſt or South Eaſt Aſpect, which is more kindly to theſe Fruits than a full South Aſpect, on which they are ſubject to ſhrivel, and be very dry, and many Sorts will be extream mealy, if expos'd too much to the Heat of the Sun; but moſt Sorts will ripen extreamly well on Eſpaliers, if rightly manag'd.

There are ſome Perſons who plant *Plums* for Standards, in which Method ſome of the ordinary Sorts will bear very well; but then the

Fruit will not be near ſo fair as thoſe produced on Eſpaliers, and will be more in danger of being bruis'd or blown down by ſtrong Winds. The Diſtance of placing them for Eſpaliers muſt be the ſame as againſt Walls, as muſt alſo their Pruning and Management, ſo that whatever may be hereafter mention'd for one, ſhould be alſo underſtood for both.

Plums do not only produce their Fruit upon the laſt Year's Wood, but alſo upon Curſons or Spurs, which come out of Wood that is two or three Years old; ſo that there is not a Neceſſity of ſhortening the Branches, in order to obtain new Shoots annually, in every Part of the Tree (as in *Peaches, Nectarines, &c.* hath been directed) ſince the more theſe Trees are pruned, the more luxuriant they grow, until the Strength of them are exhauſted, and then they gum and ſpoil: Therefore the ſafeſt Method to manage theſe Trees, is, to lay in their Shoots horizontally, as they are produced, at equal Diſtances, in proportion to the Length of their Leaves; and where there is not a ſufficient Quantity of Branches to fill up the Vacancies of the Tree, there the Shoots may be pinch'd the Beginning of *May* (in the Manner as hath been directed for *Peaches, &c.*) which will cauſe them to produce ſome lateral Branches to ſupply thoſe Places; and during the growing Seaſon, all foreright Shoots ſhould be diſplaced, and ſuch as are to remain muſt be regularly train'd in to the Wall or Eſpalier, which will not only render them beautiful, but alſo give to each an equal Advantage of Sun and Air: And hereby the Fruit will be always kept in a ductile, growing State, which they ſeldom are, when over-ſhaded with Shoots ſome Part of the Seaſon, and then ſuddenly expos'd to the Air, by the taking off or training thoſe Branches in their proper Poſition.

With thus carefully going over theſe Trees in the growing Seaſon, there will be but little Occaſion for cutting them in Winter Pruning, which (as I before have ſaid) is of ill Conſequence to all Sorts of Stone-Fruit: Beſides, many of theſe Fruits do produce Bloſſom-buds, at the Extremity of their former Year's Shoots; ſo that when thoſe are ſhortened, the Fruit is cut away, and hereby the Number of Shoots is increaſed: For whenever a Branch is ſhortened, there is commonly two or more Shoots produced from the Eyes immediately below the Cut; ſo that by thus unskilfully Pruning, many Perſons crowd their Trees with Branches, and thereby render what little Fruit the Trees do produce, very ſmall and ill-taſted, which is very commonly found in too many Gardens, where the Manager, perhaps, thinks himſelf a complete Maſter of his Buſineſs. For nothing is more common, than to ſee every Branch of a Fruit-Tree paſs the Diſcipline of the Knife, however agreeable it be to the ſeveral Sorts of Fruits.

Thoſe few Rules before laid down, will be ſufficient, if due Obſervation be join'd therewith, to inſtruct any Perſon in the right Management of theſe Sorts of Fruit-Trees, therefore I ſhall not ſay any more on that Subject, leſt, by multiplying Inſtructions, it may render it more obſcure to a Learner.

PSEUDOACACIA; Virginian Acacia, *vulgò*.

The *Characters* are;

It hath a papilionaceous Flower, from whoſe Flower-cup riſes the Pointal,

tal, wrapped up in a fimbriated Membrane, which afterwards becomes a Pod, opening into two Parts, in which are contained ſeveral kidney-ſhap'd Seeds.

The *Species* are;

1. PSEUDOACACIA; *vulgaris. Tourn.* Common Virginian Acacia.

2. PSEUDOACACIA; *Americana, latifolia, flore roſeo. Plum.*

The firſt of theſe Trees is very common in *England*, eſpecially in the Gardens near *London*, where are ſeveral very large old Trees, which have been ſeveral Years ſtanding: But the ſecond Sort is, at preſent, very rare in *England*.

Theſe Trees may be propagated by ſowing their Seeds in the Spring, upon a Bed of light freſh Earth, and when the Plants are come up, they ſhould be carefully clear'd from Weeds, and in very dry Weather, if they be refreſh'd with Water, it will greatly promote their Growth; in this Bed the Plants ſhould remain 'till the latter End of *March* following, at which time they ſhould be tranſplanted out into a Nurſery, in Rows, three Feet aſunder, and the Plants eighteen Inches Diſtance in the Rows, obſerving to lay a little Mulch upon the Surface of the Ground about their Roots, to prevent the Earth's drying too faſt: During the *Summer* Seaſon you ſhould carefully clear 'em from Weeds, and if they produce irregular Branches, they ſhould be prun'd off, while young. The Spring following the Ground between the Rows ſhould be carefully dug, that the Roots of the Trees may the more eaſily extend themſelves every Way; and in Summer, the Weeds ſhould be conſtantly hoed down, to prevent their injuring the Plants.

When the Trees have remain'd in this Nurſery three Years, they ſhould be tranſplanted where they are deſign'd to grow; for if they are permitted to remain in the Nurſery too long, they will not bear tranſplanting, their Roots creeping very far juſt under the Surface of the Earth, which, when too much cut, do ſeldom abide long in Vigour.

Theſe Trees are very hardy, in reſpect to Cold, but they will not endure to be expoſed too much to ſtrong Winds, which continually break their brittle Branches, and render 'em unſightly; ſo that many People have neglected to cultivate theſe Trees on that Account; but when they are intermix'd with other large growing Trees, in great Wilderneſſes, they make a beautiful Variety, and in *June* they are covered with large Bunches of ſweet-ſmelling Flowers.

Indeed, I can't recommend them for planting Avenues, which was the great Uſe they were formerly applied to, ſince in ſuch Places they would be greatly expoſed to the Wind, which would cauſe them to have a ragged Appearance, by the continual ſnapping of their Branches: Nor are they very proper to plant in Gardens, becauſe their Roots do extend to a great Diſtance, and emaciate the Soil; and the Numbers of Suckers, which they are apt to produce, render them very troubleſome in open Gardens; but for large Wilderneſſes, they are very proper; where, if the Soil be moiſt, they will grow to a conſiderable Magnitude.

I have ſeen ſome of theſe Trees upwards of forty Feet high, which have divided at a little Diſtance from the Ground, into three or four Branches, each of which have been equal to a large Tree; ſo that it ſhould not be planted too near other Trees, leſt, by its great Growth, it over ſhadows and deſtroys them. In many Gardens near *London*, theſe Trees have produced good Seeds, from whence a great Number of Plants have been rais'd.

PSEUDO-DICTAMNUS; Baſtard-Dittany.

The *Characters* are;

It hath a labiated Flower conſiſting of one Leaf, whoſe Upper lip or Helmet is arched, and generally cut into two Segments; but the Under-lip (or Beard) is divided into three Parts. Out of the Funnel-ſhap'd Flower-cup riſes the Pointal, attended by four Embryo's, which afterwards become ſo many oblong Seeds, encloſ'd in the Flower-cup.

The *Species* are;

1. Pseudo-dictamnus; *acetabulis Moluccæ. C. B. P.* Baſtard-Dittany, with the Pan or Hollow of Molucca Balm.

2. Pseudo-dictamnus; *Hiſpanicus, ſcrophulariæ folio. Tourn.* Spaniſh Baſtard-Dittany, with a Figwort Leaf.

3. Pseudo-dictamnus; *Hiſpanicus, ampliſſimo folio, candicante & villoſo. Tourn.* Spaniſh Baſtard-Dittany, with a large, hoary, and hairy Leaf.

4. Pseudo-dictamnus; *verticillatus, inodorus. C. B. P.* Whorled Baſtard-Dittany without Smell.

5. Pseudo-dictamnus; *Orientalis, foliis circinatis. T. Cor.* Eaſtern Baſtard-Dittany, with round Leaves.

There are ſeveral other Varieties of this Plant, which are preſerved in Botanick Gardens, but as they have little Beauty or Uſe, ſo it will be needleſs to enumerate them in this Place.

All theſe Plants may be propagated by Seeds, parting of their Roots, or Cuttings; but the two laſt being the moſt expeditious Methods, are generally practis'd. The beſt time to tranſplant and part their Roots is in the Spring, before they begin to grow, that the Off-ſets may take Root before the dry Weather. Theſe ſhould be planted in a poor, dry Soil, where they will endure the Cold much better than if planted in a richer Ground. There is no great Beauty in theſe Plants, but as they are ſometimes preſerved by curious Perſons, I thought it proper to mention them in this Place.

PSYLLIUM; Fleawort.

The *Characters* are;

This Plant agrees with Plantain and Bucks-horn Plantain in every reſpect, excepting that this riſes up with leafy Stalks, and divides into many Branches; whereas both the others produce their Flowers upon naked Pedicles.

The *Species* are;

1. Psyllium; *majus, erectum. C. B. P.* Greater upright Fleawort.

2. Psyllium; *majus, ſupinum. C. B. P.* Greater Fleawort, whoſe Branches ſpread to the Ground.

3. Psyllium; *Indicum, foliis crenatis. J. B.* Indian Fleawort, with notch'd Leaves.

There are ſeveral other Varieties of theſe Plants, diſtinguiſhed by Writers in Botany; but ſince they are of little Uſe or Beauty, I ſhall paſs 'em by without naming.

Theſe Plants may be propagated by ſowing of their Seeds in the Spring, on a Bed of light Earth, and when they are come up they ſhould be clear'd from Weeds, pulling out at the ſame time ſome of the Plants, where they ſtand too cloſe, leaving the remaining ones about eight or nine Inches aſunder; after which they will require no farther Care, but to clear 'em from Weeds; and in *June* they will flower, and their Seeds will ripen in Autumn.

The ſecond Sort will abide two or three Years, provided they are on a poor, dry Soil; but the other two Sorts periſh every Year.

The firſt Sort, which is the moſt common, is uſed in Medicine; but the other two are never uſed in *England*.

PTARMICA; Sneezwort.

The *Characters* are;

It hath radiated Flowers, whoſe Disk conſiſts of many Florets, but the Borders are compos'd of half Florets; the Embryo's are lodg'd in the Flower-cup, which is ſcaly, each of which becomes one ſlender Seed.

The *Species* are;

1. Ptarmica; *vulgaris, folio longo, ſerrato, flore albo. J. B.* Common Sneezwort, with a long ſerrated Leaf, and a white Flower.

2. Ptarmica; *vulgaris, flore pleno. Cluſ. Hiſt.* Common Sneezwort, with a double Flower, by ſome *call'd* Double Pellitory.

3. Ptarmica; *foliis profundé ſerratis, laté viridibus, elatior. H. L.* Taller Sneezwort, with broad green Leaves deeply ſerrated.

4. Ptarmica; *Alpina, incanis, ſerratis, foliis. H. L.* Alpine Sneezwort, with hoary ſerrated Leaves.

5. Ptarmica; *incana, pinnulis criſtatis. T. Cor.* Hoary Sneezwort, with creſted Leaves.

The firſt of theſe Plants is very common upon Heaths and in ſhady Places in divers Parts of *England*, and is rarely cultivated in Gardens. This is the Sort directed for Medicinal Uſe in the *College Diſpenſatory*.

The ſecond Sort is a Variety of the firſt, which was accidentally obtained: The Flowers of this Kind are very double, and generally produced in large Bunches; which, together with its long Continuance in Flower, renders it worthy of a Place in every good Garden. This Sort propagates it ſelf very faſt by its Roots, which ſpread very far under Ground, ſo that it ſhould not be planted too near other Plants, leſt it over-run and deſtroy them.

The beſt time to tranſplant theſe Roots is in Autumn, that they may take Root before Winter, ſo that they will be in no Danger of ſuffering from Drought the Spring following; and will be capable of producing ſtronger Stalks, and a greater Quantity of Flowers.

This Plant always makes the beſt Appearance when its Roots are confined; becauſe, when they are ſuffered to ſpread, the Stalks come up thin and ſtraggling, and the greateſt Beauty of it is, to ſee it grow cloſe in large Tufts, for which Reaſon many Perſons chuſe to plant it in Pots, fill'd with light, ſandy Earth, in which, if they are duly water'd in dry Weather, they will thrive exceedingly, and make a very handſome Appearance. It is alſo very proper to plant on ſuch Borders as are gravelly and poor (on which few other things will thrive) where the Roots of this Plant will be confined, more than if planted in a better Soil, and they will flower very well.

The third and fourth Sorts are ſeldom preſerved in Flower-Gardens, being Plants of little Beauty. Theſe may be propagated by parting their Roots, either in Spring or Autumn, and will grow upon almoſt any Soil, or in any Situation.

The fifth Sort was brought from the *Levant* by Monſieur *Tournefort*, but was known long before: Many of the old Botaniſts were of

Opinion, that the Seeds of this Plant was the *Semen Santonicum* of the Shops; but it is now generally believed to be the Seeds of ſome other Plant of that Kind. But however, this Plant deſerves a Place in every good Garden, for the Variety of its ſilver-colour'd Leaves, together with its long Continuance in flower.

It may be propagated by planting Cuttings, during any of the Summer Months, upon a Bed of light, freſh Earth, obſerving to water and ſhade them until they have taken Root; after which they will require no farther Care, but only to clear them from Weeds, until *September* following; when they ſhould be carefully taken up, preſerving a Ball of Earth to the Roots of each Plant, and planted in a warm dry Situation; and if it be on a poor gravelly or rubbiſhing Soil, they will endure the Cold better, and make much more beautiful Plants. This Sort ſeldom perfects Seeds in *England*.

PULEGIUM; Penny-Royal or Pudding-Graſs.

The *Characters* are;

It hath a labiated Flower, conſiſting of one Leaf, whoſe Upper-lip (or Creſt) is intire, but the Lower-lip (or Beard) is divided into three Parts; out of the Flower-cup riſes the Pointal, attended by four Embryo's, which afterwards become ſo many Seeds; to which may be added, That the Flowers grow in ſhort thick Whorles.

The *Species* are;

1. Pulegium; *latifolium. C. B. P.* Common *or* broad-leav'd Penny-Royal.

2. Pulegium; *Hiſpanicum, erectum, ſtaminibus florum extantibus.* Upright Spaniſh Penny-Royal, whoſe *Stamina* ſtand out from the Flowers.

3. Pelugium; *anguſtifolium. C. B. P.* Narrow-leav'd Penny-Royal.

4. Pulegium; *anguſtifolium, flore albo. H. R. Par.* Narrow-leav'd Penny-Royal, with a white Flower.

The firſt of theſe Plants is very common on moiſt Heaths in divers Parts of *England*. This is the Sort recommended by the Phyſicians for Medicinal Uſe: But the ſecond Sort, although not a Native of *England*, hath obtain'd in the Gardens, where Medicinal Plants are cultivated, ſo much as to have quite ſuperſeded the other in the Markets, for its upright Growth, early Flowering, and more beautiful Appearance; but whether it is equally good for Uſe, I ſhall leave to thoſe to whoſe Province it more immediately belongs to examine.

The third Sort is alſo recommended to be uſed in Medicine: This is not of *Engliſh* Growth, but is very hardy, and will thrive very well if planted on a moiſt Soil; as will alſo the fourth Sort, which is only a Variety of the third, from which it differs in nothing but the Colour of its Flowers.

All theſe Plants propagate themſelves very faſt by their Branches trailing upon the Ground, which emit Roots at every Joint, and faſten themſelves into the Earth, and ſend forth new Branches; ſo that no more is required in their Culture, than to cut off any of theſe rooted Branches, and plant them out in freſh Beds, allowing them at leaſt a Foot from Plant to Plant every Way, that they may have Room to grow.

The beſt Time for this Work is in *September*, that the Plants may be rooted before Winter; for if the old Roots are permitted to remain ſo cloſe together, as they generally grow in the Compaſs of a Year, they are ſubject to rot in Winter; beſides, the young Plants will be much ſtronger, and produce a larger Crop the ſucceeding Summer than if they were remov'd in the Spring. Theſe Plants do all love a moiſt ſtrong Soil, in which they will flouriſh exceedingly.

PULMONARIA; Lungwort.

The *Characters* are;

The Flower conſiſts of one Leaf, which is ſhap'd like a Funnel, whoſe upper Part is cut into ſeveral Segments; from its fiſtulous Flower-cup, which is for the moſt part pentagonal, riſes the Pointal, encompaſs'd by four Embryo's, which afterwards become ſo many Seeds encloſ'd in the Flower-cup.

The *Species* are;

1. Pulmonaria; *vulgaris, maculoſo folio. Cluſ. Hiſt.* Common ſpotted Lungwort, *by ſome call'd* Sage of Jeruſalem, *and* Jeruſalem Cowſlip.

2. Pulmonaria; *major, non maculoſa. J. B.* Greater Lungwort, without Spots.

3. Pulmonaria; *foliis echii. Lob. Ic.* Lungwort, with Leaves like Vipers-Bugloſs.

4. Pulmonaria; *maxima, foliis quaſi ſaccharo incruſtatis. Pluk. Phyt.* Greateſt Lungwort with Leaves very much ſpotted.

There are ſeveral other *Species* of this Plant which are preſerv'd in curious *Botanick* Gardens for Variety; but thoſe here mention'd are the principal Kinds which are cultivated in the *Engliſh* Gardens.

The firſt Sort is us'd in Medicine as a Vulnerary Herb, but is by many People preſerv'd in Gardens; as are alſo the three other Sorts, for the Variety of their ſpotted Leaves, and pretty Bunches of blue Flowers.

Theſe Plants may be cultivated by parting of their Roots, which may be done either in the Spring or Autumn; but if the Ground be moiſt into which they are planted, it is better to be done in the Spring, otherwiſe the Autumn is the moſt preferable Seaſon, that the Plants may be well rooted before the dry Weather comes on in the Spring, which will cauſe them to flower much ſtronger.

The Soil in which they are planted, ſhould not be rich, but rather a freſh, light, ſandy Ground, in which they will thrive much better than in a richer Soil, in which they are very ſubject to rot in Winter. The fourth Sort makes the beſt Appearance of all the Kinds, and is very hardy, will grow either in Sun or Shade, and, taking up little Room, is worthy of a Place in every good Garden for the Sake of Variety.

PULSATILLA; Paſque-Flower.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves, which are plac'd in a circular Order, and expand in Form of a Roſe; *out of the Middle of which riſes a Pointal, beſet, for the moſt part, with Chives; which afterwards becomes a Fruit, in which the Seeds are gather'd, as it were, into a little Head, each ending in a ſmall Hair: To which muſt be added, Some little Leaves encompaſſing the Pedicle below the Flower, as in the* Anemone; *from which the* Paſque-*Flower differs, in the Seed ending in a Tail.*

The *Species* are;

1. Pulsatilla; *folio craſſiore, & majore flore. C. B. P.* Paſque-Flower, with thicker Leaves and a larger Flower.

2. **Pulsatilla**; *flore violaceo, duplici fimbriato. H. R. Par.* Paſque-Flower, with a double-fring'd Violet-colour'd Flower.

3. **Pulsatilla**; *flore minore nigricante. C. B. P.* Paſque Flower, with a ſmaller darker Flower.

4. **Pulsatilla**; *flore rubro obtuſo. C. B. P.* Red Paſque-Flower.

5. **Pulsatilla**; *flore albo. C. B. P.* White Paſque-Flower.

6. **Pulsatilla**; *lutea, Apii hortenſis folio. C. B. P.* Yellow Paſque-Flower, with a Leaf of Garden Parſley.

7. **Pulsatilla**; *lutea, Alpina, hiſpidior. C. B. P.* Yellow hairy Paſque-Flower of the Alps.

The firſt of theſe Plants is common in divers Parts of *England*; it grows in great Plenty on *Gogmagog-Hills*, on the Left-hand of the Highway leading from *Cambridge* to *Haveril*, juſt on the Top of the Hill; alſo about *Hilderſham*, ſix Miles from *Cambridge*; and on *Bernack-Heath*, not far from *Stamford*; and on *Southrop-Common*, adjoining thereto; alſo on mountainous and dry Paſtures, juſt by *Leadſtone-Hall*, near *Pontefract* in *Yorkſhire*. It flowers about the End of *March* or Beginning of *April*.

The other Sorts are leſs common in *England*, being all of them Natives of other Countries, and are only to be met with in ſome curious Gardens in *England*, where they are cultivated for the Beauty of their Flowers.

Theſe Plants may be propagated by Seed, which ſhould be ſown in Boxes or Pots, fill'd with very light ſandy Earth; obſerving not to cover the Seeds too deep with Mould, which will prevent their Riſing, for they require no more than juſt to be cover'd. Theſe Boxes ſhould be placed where they may have the Morning Sun until ten of the Clock, but muſt be ſkreen'd from it in the Heat of the Day; and if the Seaſon proves dry, the Earth ſhould be often refreſh'd with Water. The beſt Time for ſowing of theſe Seeds is in *July*, ſoon after they are ripe, for if they are kept till Spring they ſeldom grow.

Theſe Boxes or Pots, in which the Seeds are ſown, ſhould remain in this ſhady Situation until the Beginning of *October*, when they ſhould be remov'd where they may enjoy the full Sun during the Winter Seaſon: About the Beginning of *March* the Plants will begin to appear; at which Time the Boxes ſhould be again remov'd where they may have only the Forenoon Sun, for if they are too much expos'd to the Heat, the young Plants will die away: They ſhould alſo be refreſh'd with Water in dry Weather, which will greatly promote their Growth; and they muſt be carefully preſerv'd from Weeds, which if ſuffer'd to grow amongſt them, will in a ſhort Time deſtroy them.

When the Leaves of theſe Plants are intirely decay'd (which is commonly in *July*) you ſhould then take up all the Roots, which being nearly of the Colour of the Ground, will be difficult to find while ſmall; therefore you ſhould paſs the Earth through a fine Wire Sieve, which is the beſt Method to ſeparate the Roots from the Earth (but notwithſtanding all poſſible Care taken, yet there will be many ſmall Roots left; ſo that the Earth ſhould either be put into the Boxes again, or ſpread upon a Bed of light Earth, to ſee what Plants will ariſe out of it the ſucceeding Year:) The Roots being taken up, ſhould be immediately planted again on Beds of light, freſh, ſandy Earth, about three or four Inches aſunder, covering them about three Inches thick with the ſame light Earth. The Spring following, moſt of theſe Plants will produce Flowers, but they will not be ſo large and fair, as in the ſucceeding Years, when the Roots are larger.

They may alſo be propagated by parting of their Roots; the beſt Time for which is in *July* or *Auguſt*, when their Leaves are intirely decay'd, for if they are remov'd while their Leaves remain freſh, the Roots do commonly rot; theſe Roots being ſomewhat like thoſe of *Anemonies*, may be divided into ſeveral Tubers or Heads, but ſhould not be parted too ſmall, which will occaſion their Flowers to be very weak and but few in Number: They muſt always be planted in a freſh, undung'd Soil, and ſhould have an open Situation; nor ſhould the Roots be tranſplanted oftener than every other Year, if you deſign to have them produce ſtrong Flowers: But the Earth upon the Surface of the Beds ſhould be refreſh'd at leaſt once a Year, which will greatly encourage the Roots.

PUMPION; *vide* Pepo.

PUNICA: The Pomegranate-Tree.

The *Characters* are;

The Flower conſiſts of many Leaves, plac'd in a circular Order, which do expand in Form of a Roſe, *whoſe Bell-ſhap'd multifid Flower-cup afterwards becomes a globular Fruit, having a thick, ſmooth, brittle Rind, and is divided into ſeveral Cells, which contain oblong, hard Seeds, ſurrounded with a ſoft Pulp.*

The *Species* are;

1. Punica; *qua malum Granatum fert. Caſalp.* The Common Pomegranate.

2. Punica; *fructu dulci. Tourn.* The Sweet Pomegranate.

3. Punica; *ſylveſtris. Cord. Hiſt.* The Wild Pomegranate.

4. Punica; *flore pleno, majore. Tourn.* The Double-flower'd Pomegranate.

5. Punica; *Americana, nana, ſeu humillima. Tourn.* The American Dwarf Pomegranate.

The firſt of theſe Trees is now pretty common in the *Engliſh* Gardens, where formerly it was nurſed up in Caſes, and preſerv'd in Green-houſes with great Care (as was alſo the Double-flowering Kind;) but they are both hardy enough to reſiſt the ſevereſt Cold of our Climate in the open Air; and if planted againſt warm Walls, in a good Situation, the firſt Sort will often produce Fruit, which in warm Seaſons will ripen tolerably well: But as theſe Fruits do not ripen till late in the Autumn, ſo they are ſeldom well taſted in *England*; for which Reaſon the Sort with double Flowers is commonly preferr'd to it: The Sort with ſweet Fruit, as alſo the wild Sort, is leſs common in the *Engliſh* Gardens than the former two.

Theſe Plants may be eaſily propagated by laying down their Branches in the Spring, which in one Year's time will take good Root; and may then be tranſplanted where they are deſign'd to remain. The beſt Seaſon for tranſplanting of theſe Trees is in Spring, juſt before they begin to ſhoot: They ſhould have a ſtrong, rich Soil, in which they flower much better, and produce more Fruit than if planted on a dry poor Earth. But in order to obtain theſe in Plenty, there ſhould be Care taken in the pruning of the Trees; for want of which we often ſee theſe Trees very full of ſmall Shoots, but do not find many Flowers produc'd upon them; therefore I ſhall ſet down Directions for pruning of theſe Trees, ſo as to obtain a great Quantity of Flowers and Fruit.

The Flowers of this Tree are always produc'd at the Extremity of the Branches which were produc'd the ſame Year: This therefore directs, that all weak Branches of the former Year ſhould be cut out, and that the ſtronger ſhould be ſhorten'd in Proportion to their Strength, in order to obtain new Shoots in every Part of the Tree. Theſe Branches may be laid in againſt the Wall, about four or five Inches aſunder; for as their Leaves are ſmall, ſo there is not a Neceſſity of allowing them a greater Diſtance. The beſt Time for this Work is about *Michaelmas*, or a little later, according to the Mildneſs of the Seaſon; but if they are left until Spring before they are prun'd, they ſeldom put out their Shoots ſo early; and the earlier they come out, the ſooner the Flowers will appear, which is of great Conſequence where Fruit is deſir'd. In Summer they will require no other dreſſing, but to cut off very vigorous Shoots which grow from the Wall, and do never produce Flowers, (for it is the middling Shoots only which are fruitful) and when the Fruit is form'd, the Branches on which they are, ſhould be faſten'd to the Wall to ſupport them, otherwiſe the Weight of the Fruit, when grown large, will be apt to break them down.

Though, as I ſaid before, the Fruit of this Tree ſeldom arrives to any Perfection in this Country, ſo as to render it valuable; yet for the Beauty of its ſcarlet Colour, together with the Variety of its Fruit, there ſhould be one Tree planted in every good Garden, ſince the Culture is not great which they require: The chief Care is to plant them upon a rich, ſtrong, Soil, and in a warm Situation. Upon ſome Trees, which had theſe Advantages, I have obſerv'd a great Quantity of Fruit which have arriv'd to their full Magnitude; but I can't ſay they were well-flavour'd; but however, they made a very handſome Appearance upon the Trees.

The double-flowering Kind is much more eſteem'd than the other in this Country, for the ſake of its large, beautiful, double Flowers, which are of a moſt beautiful ſcarlet Colour, and if the Trees are ſupply'd with Nouriſhment, will continue to produce Flowers for near three Months ſucceſſively, which renders it one of the moſt valuable Flowering-trees yet known. This muſt be prun'd and managed in the ſame Manner as hath been already directed for the Fruit-bearing Kind: But this Sort may be render'd more productive of its beautiful Flowers, by grafting it upon Stocks of the ſingle Kind, which will check the Luxuriancy of the Trees, and cauſe them to produce Flowers upon almoſt every Shoot; by which Method I have had a low Tree, which was planted in the open Air, extremely full of Flowers, which made a very fine Appearance.

The Dwarf Sort was brought into *Europe* from the warmeſt Parts of *America*, where the Inhabitants cultivate it in their Gardens for the Beauty of its Flowers, together with its continuing to produce

Flowers and Fruit moſt Part of the Year, and do ſeldom grow above three Feet high. The Fruit of this Kind is ſeldom much larger than a *Walnut*, and not very pleaſant to the Taſte; ſo that 'tis rather cultivated for Shew than for the Sake of its Fruit.

This Plant may be propagated by Layers, in the ſame manner as the former Sorts, but muſt be planted in Pots fill'd with rich Earth, and preſerv'd in a Stove, otherwiſe it is too tender to endure the Cold of our Winters; and in the Summer, when the Flowers begin to appear, if the Plants are expos'd to the open Air, the Buds will fall off, and never open; ſo that it ſhould ſeldom be remov'd into the open Air, but be conſtantly preſerv'd in the Stove with other Plants of the ſame Country; obſerving never to place them too near the Heat, which will cauſe them to produce long Shoots, but no Flowers will appear upon them; but rather let them have a moderate Warmth, in which they will thrive better than in a greater Heat.

I have heard of a Sort of *Pomegranate* with double-ſtrip'd Flowers, and have ſeen it mention'd in ſome foreign Catalogues, but have not ſeen the Plant growing, tho' I believe it may be eaſily procur'd from *Italy*.

PURSLAIN; *vide* Portulaca.

PYRACANTHA; *vide* Meſpilus.

PYRUS; The Pear-Tree.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves, which are plac'd in a circular Order, and do expand in Form of a Roſe; *whoſe Flower-cup afterwards becomes a fleſhy Fruit, which is more produc'd toward the Foot-ſtalk than the* Apple, *but is hollow'd like a Navel at the extreme Part; the Cells, in which the Seeds are lodg'd, are ſeparated by ſoft Membranes, and the Seeds are oblong.*

The *Species* are;

1. PYRUS; *ſativa, fructu æſtivo, parvo racemoſo, odoratiſſimo. Tourn.* Petit Muſcat. *i. e.* Little Musk Pear, *commonly call'd,* The Supream. This Fruit is commonly produced in large Cluſters; it is rather round than long; the Stalk ſhort, and when full ripe, the Skin is of a yellow Colour; the Juice is ſomewhat musky, and if gathered before it is too ripe, is an excellent *Pear*. This ripens the Beginning of *July*, and will continue good but for a few Days.

2. PYRUS; *ſativa, fructu æſtivo, minimo odoratiſſimo. Tourn.* Poire de Chio, *i. e.* The Chio Pear, *commonly call'd,* The little Baſtard Musk Pear. This is ſmaller than the former, but is in Shape pretty much like that; the Skin, when ripe, has a few Streaks of red on the Side next the Sun, and the Fruit doth ſeldom hang in Cluſters as the former, but in other Reſpects is nearly like it.

3. PYRUS; *ſativa, fructu æſtivo, parvo è viridi albido. Tourn.* Poire Hativeau, *i. e.* The Haſting Pear, *commonly call'd,* The Green Chiſſel. This is a larger *Pear* than either of the former, and is more produc'd toward the Pedicle; the Skin is thin, and of a whitiſh green Colour when ripe; the Fleſh is melting, and if not too ripe, of a ſugary Flavour. This ripens in the Middle of *July*.

4. PYRUS; *ſativa, fructu æſtivo, partim ſaturatè rubente, partim flaveſcentè. Tourn.* Muſcadelles Rouges, *i. e.* The Red Muſcadelle. *It is alſo call'd* La Belliſſime, *i. e.* The Faireſt. This is a large early *Pear*, of great

Beauty; the Skin is of a fine yellow Colour, when ripe, beautifully ſtrip'd with red; the Fleſh is melting, and has a rich Flavour, if gathered before it be too ripe. This generally produces two Crops of Fruit in a Year; the firſt is commonly ripe about the Middle of *July*, and the ſecond ripens in *September*; but this late Crop is ſeldom well-taſted.

5. Pyrus; *ſativa, fructu æſtivo, parvo, flaveſcente moſchato. Tourn.* Petit Muſcat. *i. e.* The little Muſcat. This is a ſmall *Pear*, rather round than long; the Skin is very thin, and when ripe, of a yellowiſh Colour; the Fleſh is melting, and of a rich musky Flavour, but will not keep long when ripe. This comes the Middle of *July*.

6. Pyrus; *ſativa, fructu æſtivo, oblongo, ferrugineo, carnè tenerâ moſchata. Tourn.* Jargonelle. This is a very long *Pear*, of a Pyramidal Shape, having a long Foot-ſtalk; the Skin is pretty thick, of a Ruſſet-green Colour from the Sun, but towards the Sun it is inclin'd to an Iron Colour; the Fleſh is breaking, and has a rich musky Flavour. Ripe the Middle of *July*. This is one of the beſt *Summer Pears* yet known, and is certainly what all the *French* Gardeners did formerly call the *Cuiſſe Madam*, as may be eaſily obſerved by their Deſcription of this *Pear*; but how that Name came to be applied to another Fruit in this Country, which is vaſtly inferior to it, I can't ſay.

7. Pyrus; *ſativa, fructu oblongo, è viridi flaveſcente.* The *Windſor Pear*. This is an oblong Fruit, which is produced toward the Crown, but near the Stalk is drawn toward a Point; the Skin is ſmooth, and when ripe, of a yellowiſh-green Colour; the Fleſh is very ſoft, and if it be permitted to hang but two or three Days after it is ripe, it grows mealy, and is good for nothing.

8. Pyrus; *ſativa, fructu æſtivo, oblongo, è viridi albo. Cuiſſe Madam; vulgò.* This, I am apt to believe, is what the *French* Gardeners call the *Jargonelle*; which, as I before obſerved, is now given to another Fruit, which is much preferable to this; ſo that the two Names are changed: For the *Jargonelle* is always placed amongſt thoſe which the *French* call bad Fruit; and the *Cuiſſe Madam* is ſet down amongſt their beſt Fruit; which is certainly the Reverſe with us, as they are now nam'd. This *Pear* is ſomewhat like the *Windſor*, but is more produc'd toward the Crown, and is ſmaller toward the Stalk; the Skin is ſmooth, of a pale-green Colour; the Fleſh is apt to be mealy, if it ſtands to be ripe.

9. Pyrus; *ſativa, fructu æſtivo, globoſo ſeſſili, moſchato, maculis nigris, conſperſo. Tourn.* Orange Muſquée, *i. e.* The Orange Musk. This is a middle-ſized *Pear*, of a ſhort globular Form; the Skin is of a yellowiſh Colour, ſpotted with black; the Fleſh is musky, but is very apt to be a little dry and choaky. It ripens the End of *July*.

10. Pyrus; *ſativa, fructu æſtivo, albido majori. Tourn.* Gros Blanquet, *i. e.* Great Blanket. This is alſo call'd *La Muſſette d'Anjou, i. e.* The Bagpipe of Anjou. This is a large *Pear*, approaching to a round Form; the Skin is ſmooth, and of a pale-green Colour; the Fleſh is ſoft, and full of Juice, which hath a rich Flavour. The Stalk is ſhort, thick, and ſpotted, the Wood is ſlender, and the Leaf is very much like

that of the Tree call'd the *Jargonelle*. This ripens the End of *July*.

11. Pyrus; *ſativa, fructu æſtivo, albido, ſaccharato odoratiſſimo. Tourn.* The Blanquette, *or* Muſk Blanquette; the little Blanket Pear. This *Pear* is much leſs than the former, and more pinch'd in near the Stalk, which is alſo ſhort, but ſlenderer than that of the former; the Skin is ſoft, and of a pale-green Colour; the Fleſh is tender, and full of a rich muſky Juice. The Wood of this Tree is much ſtronger than is that of the former, and the Shoots are commonly ſhorter. This ripens the End of *July*.

12. Pyrus; *ſativa, fructu æſtivo, albido, pediculo longo donato. Tourn.* Blanquette a longue queüe, *i. e.* Long-ſtalk'd Blanket Pear. This *Pear* is in Shape ſomewhat like the former, but the Eye is larger, and more hollow'd at the Crown; towards the Stalk it is ſomewhat plumper, and a little crooked; the Skin is very ſmooth, white, and ſometimes toward the Sun is a little colour'd; the Fleſh is between melting and breaking, and is full of a rich ſugary Juice. This ripens the Beginning of *Auguſt*.

13. Pyrus; *ſativa, fructu æſtivo, oblongo, ruſſeſcente ſaccharato. Tourn.* Poire ſans Peau, *i. e.* The Skinleſs Pear. It is alſo call'd *Fleur de Guigne, i. e.* Flower of Guigne; and *Rouſſellet hâtiſſ, i. e.* The Early Ruſſelet. This is a middle-ſiz'd Fruit of a long Shape, and a reddiſh Colour, ſomewhat like the *Ruſſelet*; the Skin is extremely thin; the Fleſh is melting, and full of a rich ſugary Juice. This ripens the End of *July*.

14. Pyrus; *ſativa, fructu æſtivo, turbinato, carne tenera, ſaccharata. Tourn.* Muſcat Robine, *i. e.* The Muſk Robin *Pear*. This is alſo call'd *Poir à la Reine*; *i. e.* The Queen's Pear; *Poire d'Ambre, i. e.* The Amber Pear; and *Pucelle de Xaintonge, i. e.* The Virgin of Xaintonge. This is a ſmall round *Pear*, of a yellowiſh Colour when ripe; the Fleſh is melting, and has a rich muſky Flavour. It is a great Bearer, and ripens the End of *July*.

15. Pyrus; *ſativa, fructu æſtivo, turbinado moſchato.* Le Bourdon Muſqué, *i. e.* The Muſk Drone Pear. This is a middle-ſiz'd, round Fruit, whoſe Skin is of a yellowiſh Colour when ripe; the Fleſh is melting, and full of a high, muſky Juice; but it muſt not hang too long on the Tree, for it is ſubject to grow mealy in a ſhort Time. This ripens the End of *July*.

16. Pyrus; *ſativa, fructu æſtivo, globoſo, ſeſſili, e viridi purpuraſcente ſaccharato, odorato. Tourn.* Orange Verte, *i. e.* The Green Orange Pear. This *Pear* hath been the moſt common of all the Sorts in *France*, which was occaſion'd by the general Eſteem it was in ſome Years ſince. This is a middle-ſiz'd, round Fruit; of a greeniſh Colour; but the Side next the Sun changes to a purple Colour when ripe; the Fleſh is melting, and the Juice is ſugar'd, with a little Perfume; the Eye is very hollow, and the Stalk is ſhort. This ripens the Beginning of *Auguſt*.

17. Pyrus; *ſativa, fructu æſtivo, oblongo minori, cinereo, odorato. Tourn.* *Caſſolette.* This is ſo call'd from its being ſhap'd like a Perfuming-pot. It is a long Fruit, in Shape like the *Jargonelle*, of an Aſh Colour; its Fleſh is melting, and full of a perfum'd Juice, but is very

apt

ot in the Middle ſo ſoon as
ierwiſe it would be eſteem'd
llent *Pear*. It is ripe the
ng of *Auguſt*.

PYRUS; *ſativa, fructu æſtivo,*
e, e viridi albido. Poire
né, *i. e.* The Magdalene
This is a large, round *Pear*,
e like a *Burgamot*; the Skin
, and the Fleſh is melting,
s very ſubject to rot upon
e, which renders it not near
ble as ſome others. It ripens
l of *July*.

YRUS; *ſativa, fructu æſtivo,*
viridi purpuraſcente. Tourn.
ignonet, *i. e.* The Great
ear: It is alſo call'd *Amiré-*
, e. Brown Admir'd; and
é, i. e. King of Summer.
a middle-ſiz'd, round *Pear*,
wniſh Colour next the Sun;
h is melting, and the Juice
bly good. This ripens the
July.

YRUS; *ſativa, fructu æſtivo,*
ſeſſili, ex albido flaveſcente
to, odorato. Tourn. Robine.
o call'd *Muſcat d' Aouſt, i. e.*
guſt Muſcat; *Poire d'Averat*,
he Averat Pear; and *Poire*
i. e. The Royal Pear. This
undiſh, flat *Pear*, in Shape
ce a *Burgamot*; the Stalk is
raight, and a little ſpotted,
e Eye is a little hollowed;
n is ſmooth, and of a whi-
ow Colour; the Fleſh is
g, but not hard, and its
richly ſugar'd and perfum'd:
great Bearer, and is eſteem'd
the beſt *Summer Pears* yet
. It ripens in *Auguſt*.

PYRUS; *ſativa, fructu æſtivo,*
ſeſſili, odorato. Tourn. Poire-
e. The Roſe Pear. This is
, round Fruit, of a yellowiſh-
Colour, but a little inclining
on the Side next the Sun;

the Stalk is very long and ſlender; the Fleſh is breaking, and the Juice is musky. This ripens in *Auguſt*.

22. PYRUS; *ſativa, fructu æſtivo, globoſo, albido, ſaccharato. Tourn.* Poire du Bouchet. This is a large, round whitiſh *Pear*, ſhap'd ſomewhat like the *Beſidery*; the Fleſh is ſoft and tender, and the Juice is ſugary. This ripens the Middle of *Auguſt*.

23. PYRUS; *ſativa, fructu æſtivo, turbinato, ſeſſili, ſaturatius rubente punctato. Tourn.* Poire de Parfum, *i. e.* The perfum'd Pear. This is a middle-ſiz'd, round Fruit, whoſe Skin is ſomewhat thick and rough, and of a deep-red Colour, ſpotted with brown; the Fleſh is melting, but dry, and has a perfum'd Flavour. This ripens the Beginning of *Auguſt*.

24. PYRUS; *ſativa, fructu æſtivo, oblongo, magno, partim rubro, partim albido, odorato. Tourn.* Bon Chrêtien d'Eſte, *i. e.* The Summer Bonchrêtien *or* Good Chriſtian. This is a large oblong Fruit, whoſe Skin is ſmooth and thin; the Side next the Sun is of a beautiful red Colour, but the other Side is of a whitiſh-green; the Fleſh is between breaking and tender, and is very full of Juice, which is of a rich perfum'd Flavour. It ripens the End of *Auguſt*.

25. PYRUS; *ſativa, fructu æſtivo, globoſo, ex rubro albidoque flaveſcente, ſaccharato, odorato. Tourn. Salviati.* This *Pear* is pretty large, round and flat, very much like the *Beſidery* in Shape, but not in Colour; the Stalk is very long and ſlender, and the Fruit is a little hollow'd both at the Eye and Stalk; the Colour is Red and Yellow next the Sun, but on the other Side is whitiſh; the Skin is rough; the Fleſh is tender, but a little ſoft; the Juice

is ſugary, and perfum'd, ſomewhat like the *Robiue*, but is not near ſo moiſt. This ripens the End of *Auguſt*.

26. Pyrus; *ſativa, fructu æſtive, globoſo, ſeſſili, ruffeſcente, odorato.* Caillot-roſat, *i. e.* Roſe-water Pear. This is a large, round *Pear*, ſomewhat like the *Meſſire-Jean*, but rounder; the Stalk is very ſhort, and the Fruit is hollow'd like an *Apple* where the Stalk is produc'd; the Skin is rough, and of a brown Colour; the Fleſh is breaking, and the Juice is very ſweet. This ripens the End of *Auguſt*.

27. Pyrus; *ſativa, fructu æſtivo, longo acerbitate ſtrangulationem minitante. Tourn.* Poire d'Etrangillon, *i. e.* The Choaky Pear. This is ſeldom preſerv'd in Gardens, ſo there needs no Deſcription of it.

28. Pyrus; *ſativa, fructu æſtivo, oblongo, è ferrugineo rubente, nonnunquam maculato.* Poire de Rouſſelet, *i. e.* The Ruſſelet Pear. This is a large oblong *Pear*; the Skin is brown, and of a dark-red Colour next the Sun; the Fleſh is tender and ſoft, without much Core; the Juice is agreeably perfum'd, if gather'd before it be too ripe. This produces larger Fruit on an Eſpalier than on Standard-Trees. It ripens the End of *Auguſt*.

29. Pyrus; *ſativa, fructu æſtivo, ſubrotundo, partim rubro, partim flaveſcente, odorato.* Poire de Prince, *i. e.* The Prince's Pear. This is a ſmall, roundiſh *Pear*, of a bright red Colour next the Sun, but of a yellowiſh Colour on the oppoſite Side; the Fleſh is between breaking and melting: The Juice is very high-flavour'd, and it is a great Bearer. This ripens the End of *Auguſt*; but will keep a Fortnight good, which is what few Summer Fruits will do.

30. Pyrus; *ſativa, fructu æſtivo, globoſo, viridi, in ore liqueſcente.* Gros Moüiile-bouche, *i. e.* The Great Mouth-water Pear. This is a large round *Pear*, with a ſmooth green Skin: the Stalk is ſhort and thick, the Fleſh is melting and full of Juice, if gather'd before it be too ripe, otherwiſe it is apt to grow mealy. This ripens the Middle of *Auguſt*.

31. Pyrus; *ſativa, fructu æſtivo, rotundo, ſeſſili, ſaccharato, e viridi flaveſcente.* Bergamotte d'Eſtè, *i. e.* Summer Burgamot. This is by ſome call'd the *Hambden's Burgamot*. This is a pretty large round flat *Pear*, of a greeniſh-yellow Colour, and hollow'd a little at both Ends like an *Apple*; the Fleſh is melting, and the Juice is highly perfum'd. This ripens the Middle of *Auguſt*.

32. Pyrus; *ſativa, fructu autumnali, ſeſſili, ſaccharato, odorato e viridi flaveſcente, in ore liqueſcente. Tourn.* Bergamotte d' Automne, *i. e.* The Autumn Burgamot. This is a ſmaller *Pear* than the former, but is nearly of the ſame Shape; the Skin is of a yellowiſh Green but changes to a faint Red on the Side next the Sun; the Fleſh is melting, and its Juice is richly perfum'd; it is a great Bearer, and ripens the Middle of *September*.

33. Pyrus; *ſativa, fructu autumnali, turbinato, viridi, ſtriis ſanguineis diſtincta. Tourn.* Bergamotte de Suiſſe, *i. e.* the Swiſs Burgamot. This *Pear* is ſomewhat rounder than either of the former, the Skin is tough, of a greeniſh Colour, ſtrip'd with Red; the Fleſh is melting and full of Juice, but it is not ſo richly perfum'd as either of the former. This ripens the End of *September*.

34. Pyrus; *ſativa, fructu autumnali, ſuaviſſimo, in ore liqueſcente. Tourn.* Beurre rouge, *i. e.* The Red

Butter-Pear; it is call'd *l'Amboiſe*, and in Normandy *Iſambert*; as alſo *Beurre gris*, *i. e.* The Grey Butter; and *Beurre vert*, *i. e.* The Green Butter-Pear. All theſe different Names of *Buerre's* have been occaſion'd by the Difference of the Colours of the ſame Sort of *Pear*, which is either owing to the different Expoſure where they grew, or from the Stock; thoſe upon *Quince* Stocks being commonly of a browner Colour than thoſe which are upon free Stocks, whence ſome Perſons have ſuppos'd them to be different Fruits, though, in reality, they are the ſame. This is a large long Fruit, for the moſt part of a brown Colour; the Fleſh is very melting and full of a rich ſugary Juice; it ripens the End of *September*, and, when gather'd from the Tree, is one of the very beſt Sort of *Pears* we have.

35. Pyrus; *ſativa, fructu autumnali, turbinato, ſeſſili, flaveſcente & in ore liqueſcente. Tourn.* Le Doyenné, *i. e.* The Deans Pear. It is alſo call'd by all the following Names; *Saint Michel*, i. e. *Saint Michael*; *Beurre blanc d'Automne*, i. e. The *White Autumn Butter Pear*; *Poire de Neige*, i. e. *the Snow Pear*; *Bonne Ente*, i. e. a *Good Graft*; the *Carliſle* and *Valentia*. This is a large fair Fruit, in Shape ſomewhat like the *Grey Beurre*, but is ſhorter and rounder; the Skin is ſmooth, and, when ripe, changes to a yellowiſh Colour; the Fleſh is melting and full of Juice, but it will not keep good a Week after it is gather'd, being very ſubject to grow mealy. This is a great Bearer, and ripens the End of *September*.

36. Pyrus; *ſativa, fructu autumnali, longo, viridique, odorato, in ore liqueſcente. Tourn.* La Vertelongue, *i. e.* The Long Green Pear: It is alſo call'd *Moüille-bouche d'Automne*, *i. e.* The Autumn Mouth-Water Pear. This is a long Fruit, which is very green when ripe; the Fleſh is melting and very full of Juice; which (if it grows upon a dry warm Soil, and upon a free Stock) is very ſugary, otherwiſe it is but a very indifferent *Pear*. It ripens the Beginning of *October*.

37. Pyrus; *ſativa, fructu autumnali, tuberoſo, ſeſſili, ſaccharato, carne durâ. Tourn.* Meſſire-Jean blanc & gris, *i. e.* The White and Grey Monſieur John. Theſe, although made two Sorts of Fruit by many Perſons, are indubitably the ſame; the Difference of their Colour proceeding from the different Soils and Situations where they grow, or the Stocks on which they are grafted. This *Pear*, when grafted on a free Stock, and planted on a middling Soil, neither too wet, nor over dry, is one of the beſt *Autumn Pears* yet known; but when it is grafted on a *Quince* Stock, it is very apt to be ſtony; or if planted on a very dry Soil, is very apt to be ſmall and good for little, unleſs the Trees are water'd in dry Seaſons: which has render'd it leſs eſteem'd by ſome Perſons who have not conſider'd the Cauſe of their Hardneſs; for when it is rightly manag'd, there is not any *Pear* in the ſame Seaſon to be compar'd with it. This is a large roundiſh Fruit, the Skin is rough, and commonly of a brown Colour; the Fleſh is breaking and very full of a rich ſugar'd Juice. It ripens the Beginning of *October*, and will continue good moſt Part of the Month.

38. Pyrus; *ſativa, fructu autumnali, globoſo, ferrugineo, carne tenerâ, ſapidiſſima. Tourn.* Muſcat fleuri. *i. e.* The flower'd Muſcat.

It is alſo call'd *Muſcat à longue queüe d'Automne, i. e.* The Long-ſtalk'd Muſcat of the Autumn. This is an excellent *Pear*, of a middling Size, and round; the Skin is of a dark red Colour; the Fleſh is very tender, and of a delicate Flavour. It ripens in the Middle of *October*.

39. Pyrus; *ſativa, fructu autumnali, globoſo, ferrugineo, carne viſcida. Tourn.* Poire de Vigne, *i. e.* The Vine Pear. This is a round Fruit, of a middling Size; the Skin is of a dark red Colour; the Fleſh is very melting, and full of a clammy Juice; the Stalk is very long and ſlender. This Fruit ſhould be gather'd before it be full ripe, otherwiſe it grows mealy, and ſoon rots. It ripens the Middle of *October*.

40. Pyrus; *ſativa, fructu autumnali, oblongo, dilute ruffeſcente, ſaccharato, odoratiſſimo. Tourn.* Poire Rouſſeline, *i. e.* The Rouſſeline Pear. It is alſo call'd in *Touraine*, *Le Muſcat à longue-queë de la fin d'Automne, i. e.* The Long-ſtalk'd Muſcat of the End of Autumn. This is by ſome *Engliſh* Gardeners call'd the *Brute-bonne*; but that is a very different Fruit from this. It is ſhap'd ſomewhat like the *Rouſſelet*, but the Skin of this is ſmooth, and of a greeniſh Yellow from the Sun, but the Side next the Sun is of a deep Red Colour, with ſome Spots of Grey; the Fleſh is very tender and delicate; the Juice is very ſweet, with an agreeable Perfume. It ripens the Beginning of *October*, but muſt not be long kept leſt it rot in the Middle.

41. Pyrus; *ſativa, fructu autumnali, oblongo, majori, cinereo. Tourn.* Poire Pendar, *i. e.* The Knave's Pear. This is very like the *Caſſolette Pear*, but is ſomewhat larger; the Fleſh is fine and tender; the Juice is very much ſugar'd. It ripens the End of *October*.

42. Pyrus; *ſativa, fructu autumnali, turbinato, tuberoſo, viridi, ſaccharato, in ore liqueſcente. Tourn.* Sucré-vert, *i. e.* The Green Sugar-Pear. This *Pear* is ſhap'd like the *Winter-Thorn*, but is ſmaller; the Skin is very ſmooth and green; the Fleſh is very buttery; the Juice is ſugar'd, and of an agreeable Flavour; but it is ſometimes ſubject to be ſtony in the Middle, eſpecially if grafted on a *Quince* Stock.

43. Pyrus; *ſativa, fructu autumnali, tuberoſo, ſeſſili, è viridi, flaveſcente maculis nigris conſperſo, carne tenerâ ſaccharatâ. Tourn.* La Marquiſe, *i. e.* The Marquiſs's Pear. This is often of two different Shapes, according to the Nature of the Soil where they are planted; for when the Soil is dry, the Fruit very much reſembles a fine Blanquet; but when the Soil is very rich and moiſt, it grows much larger: It is a well-ſhap'd *Pear*, flat at the Top; the Eye is ſmall, and hollow'd; the Skin is of a greeniſh Yellow, a little inclining to Red on the Side next the Sun: If this *Pear* does not change yellow in ripening, it is ſeldom good; but if it does, the Fleſh will be tender and delicate, very full of Juice, which is ſugar'd. It ripens the End of *October*.

44. Pyrus; *ſativa, fructu autumnali, oblongo, partim albido, partim ruffeſcente.* The Chat brulé, *i. e.* The burnt Cat. It is alſo call'd *Pucelle de Xaintonge, i. e.* The Virgin of Xaintonge. This is a ſmall oblong *Pear*, ſhap'd much like the *Martin Sec*, but differs from it in Colour; this being of a pale Colour on one Side, but of dark Brown on the other; the Skin is

ſmooth; the Fleſh is tender, but dry, and if kept a ſhort time, is apt to grow mealy. It is in eating the latter End of *October*.

45. Pyrus; *ſativa, fructu autumnali, globoſo, ſeſſili è albido flaveſcente*. Le Beſidery. It is ſo call'd from *Heri*, which is a Foreſt in *Bretagne* between *Rennes* and *Nantes*, where this *Pear* was found. This is a middle-ſiz'd, round *Pear*, of a pale Green, inclining to a yellowiſh Colour; the Stalk is very long and ſlender; the Fleſh is dry, and but very indifferent for eating, but it bakes well. It ripens the End of *October*.

46. Pyrus; *ſativa, fructu brumali, ſeſſili, è viridi flaveſcente, maculato, utrinque umbilicato, in ore liqueſcente. Tourn.* The Craſane *or* Burgamot Craſane. It is alſo call'd *Beurre Plat, i. e.* the flat Butter Pear. This is a middle-ſiz'd round *Pear*, hollow'd at both Ends like an *Apple*; the Stalk is very long and crooked; the Skin is rough, of a greeniſh yellow Colour when ripe, cover'd over with a Ruſſet Coat; the Fleſh is extremely tender, and buttery, and is full of a rich ſugar'd Juice. This is in eating the Beginning of *November*.

47. Pyrus; *ſativa, fructu brumali, turbinato ſeſſili, flaveſcente, ſaccharato, odorato, in ore liqueſcente. Tourn.* Lanſac ou la Dauphine, *i. e.* the Lanſac *or* Dauphine Pear. This *Pear* is commonly about the ordinary Size of a *Burgamot*, of a roundiſh Figure, flat towards the Head, but a little produc'd towards the Stalk; the Skin is ſmooth, and of a yellowiſh green Colour; the Fleſh is yellow, tender, and melting; the Juice is ſugar'd, and a little perfum'd; the Eye is very large, as is alſo the Flower, and the Stalk is long and ſtrait. When this *Pear* is upon a free Stock, and planted on a good Soil, it is one of the beſt Fruits of the Seaſon; but when it is on a *Quince* Stock, or upon a very dry Soil, the Fruit will be ſmall, ſtony, and worth little. It ripens the Beginning of *November*.

48. Pyrus; *ſativa, fructu brumali, oblongo, partim intenſe, partim dilute ferrugineo, ſaccharato, odorato. Tourn.* Martin-ſec, *i. e.* The Dry Martin. This is ſometimes call'd the *Dry Martin* of *Champaign*, to diſtinguiſh it from another *Dry Martin* of *Burgundy*. This *Pear* is almoſt like the *Ruſſelet* in Shape and Colour, which has occaſion'd ſome Perſons to give it the Name of *Winter Ruſſelet*. It is an oblong *Pear*, whoſe Skin is of a deep Ruſſet Colour of one Side, but the other Side is inclining to a Red; the Fleſh is breaking and fine; the Juice is ſugar'd, with a little Perfume, and if grafted on a free Stock, is an excellent *Pear*; but if it be on a *Quince* Stock, it is very apt to be ſtony. It is in eating the Middle of *November*; but if they were permitted to hang their full time on the Tree, will keep good two Months.

49. Pyrus; *ſativa, fructu brumali, magno ſeſſili, e cinereo flaveſcente. Tourn.* La Villaine d' Anjou, *i. e.* The Villain of Anjou. It is alſo call'd *Poire Tulipée, i. e.* The Tulip Pear; and *Bigarrade, i. e.* The Great Orange. This is a large round *Pear*, with a very long ſlender Stalk; the Skin is of a pale yellow Colour; the Fleſh is breaking, but not very full of Juice. This is in eating the Middle of *November*.

50. Pyrus; *ſativa, fructu brumali, flaveſcente, odoratiſſimo, pediculo craſſiori. Tourn.* Poire *de Gros queue, i. e.* The large-ſtalk'd Pear.

This is a large roundiſh *Pear*, with a yellow Skin; the Stalk is very thick, from whence it had the Name; the Fleſh is breaking, and dry, and has a very musky Flavour, but it is apt to be ſtony, eſpecially if it be planted in a dry Soil, or grafted on a *Quince* Stock, as are moſt of the perfum'd *Pears*.

51. PYRUS; *ſativa, fructu brumali, turbinato, ruffeſcente odorato*. L' Amadote, *i. e.* The Amadot Pear. This is a middle-ſiz'd *Pear*, ſomewhat long, but flat at the Top; the Skin is generally rough, and of a Ruſſet Colour; the Fleſh is dry, and high-flavour'd, if grafted on a free Stock. The Wood of this Tree is generally thorny, and is eſteem'd the beſt Sort of *Pears* for Stocks to graft the melting *Pears* upon, becauſe it gives them ſome of its fine musky Flavour. It is in eating the End of *November*, but will keep good ſix Weeks.

52. PYRUS; *ſativa, fructu brumali, globoſo, dilute virente tuberoſo, punctato, in ore liqueſcente. Tourn.* Petit-Oin, *i. e.* Little Lard Pear. It is alſo call'd *Bouvar*, and *Rouſſette d' Anjou, i. e.* The Ruſſet of Anjou; and *Amadont*; and *Marveille d' Hyver, i. e.* The Wonder of the Winter. This *Pear* is of the Size and Shape of the *Ambret* or *Leſchaſſerie*, but the Skin is of a clear green Colour, and a little ſpotted; the Stalk is pretty long, and ſlender; the Eye is large, and deeply hollow'd; the Fleſh is extremely fine, and melting; the Juice is much ſugar'd, and has an agreeable musky Flavour. It is in eating the End of *November* and moſt Part of *December*, and is eſteem'd one of the beſt Fruits in that Seaſon.

53. PYRUS; *ſativa, fructu brumali, longo, e viridi albicante, in ore liqueſcente. Tourn.* Loüiſe-bonne, *i. e.* The Good Lewis Pear. This *Pear* is ſhap'd ſomewhat like the *St Germain*, or the *Autumn Vertlongue*, but is not quite ſo much pointed; the Stalk is very ſhort, fleſhy, and ſomewhat bent, the Eye and the Flower are ſmall; the Skin is very ſmooth; the Colour is green, inclining to a white when ripe; the Fleſh is extremely tender, and full of Juice, which is very ſweet, eſpecially when it grows upon a dry Soil, otherwiſe it is apt to be very large and ill-taſted. It is in eating the latter End of *November* and the Beginning of *December*.

54. PYRUS; *ſativa, fructu brumali, tuberoſo, e viridi flaveſcente, punctato ſaccharato. Tourn.* Poire de Colmar, *i. e.* The Colmar Pear. It is alſo call'd *Poire Manne*, The Manna Pear; and *Bergamotte Tardive*, The late Burgamot. This *Pear* is ſomewhat like a *Boncretien* in Shape, but the Head is flat; the Eye is large, and deeply hollow'd; the Middle is larger than the Head, and is ſlop'd toward the Stalk, which is ſhort, large, and a little bent; the Skin is green, with a few yellowiſh Spots, but is ſometimes a little colour'd on the Side next the Sun; the Fleſh is very tender, and the Juice is greatly ſugar'd. It is in eating the latter End of *November*, but will often keep good till *January*, and is eſteem'd one of the beſt Fruits of that Seaſon.

55. PYRUS; *ſativa, fructu brumali, globoſo, Citriformi, flaveſcente, punctato, in ore liqueſcente, ſaccharato, odoratiſſimo. Tourn.* L' Echaſſerie. It is alſo call'd *Verte-longue d' Hyver, i. e.* The Winter-long

green Pear; and *Beſideri Landri, i. e.* The Landry Wilding. This *Pear* is ſhap'd like a *Citron*; the Skin is ſmooth, and of a green Colour, with ſome Spots while it hangs on the Tree, but as it ripens, it becomes of a yellowiſh Colour; the Stalk is ſtrait and long; the Eye is ſmall, and not hollow'd; the Fleſh is melting, and buttery; the Juice is ſugar'd with a little Perfume. It is in eating the latter End of *November*, and continues good till *Chriſtmas*.

56. Pyrus; *ſativa, fructu brumali, longo e viridi flaveſcente, in ore liqueſcente, ſaccharato. Tourn.* La Virgoulé, *or* La Virgoleuſe. It is alſo call'd *Bujaleuf*, and *Chambrette*; and *Poire de Glaſſe, i. e.* The Ice Pear, in *Gaſcogny*; but it is call'd *Virgoule*, from a Village of that Name in the Neighbourhood of *St. Leonard* in *Limouſin*; where it was rais'd, and ſent to *Paris* by the Marquis of *Chambret*. This *Pear* is large, long, and of a green Colour, inclining to yellow as it ripens; the Stalk is ſhort, fleſhy, and a little bent; the Eye is of a middling Size, and a little hollow'd; the Skin is very ſmooth, and ſometimes a little colour'd towards the Sun; the Fleſh is melting, and full of a rich Juice. It is in eating the latter End of *November*, and will continue good till *January*, and is eſteem'd one of the beſt Fruits of the Seaſon, but the Tree is very apt to produce vigorous Shoots, and the Bloſſoms being generally produc'd at the extreme Part of the Shoot, where they are ſhorten'd, the Fruit will be intirely cut away, which is the Reaſon it is condemn'd as a bad Bearer; but when it is grafted on a free Stock, it ought to be allow'd at leaſt thirty Feet to ſpread; and if upon a *Quince* Stock, it ſhould be allow'd upwards of twenty Feet, and the Branches train'd in againſt the Eſpalier or Wall, at full Length, in an horizontal Poſition, as they are produc'd. Where this Tree is thus treated, it will bear very plentifully.

57. Pyrus; *ſativa, ſpinoſa, fructu globoſo, ſeſſili, ferrugineo, in ore liqueſcente, ſaccharato, odoratiſſimo. Tourn.* Poire d' Ambrette. This is ſo call'd from its musky Flavour, which reſembles the Smell of the *Sweet Sultan Flower*, which is call'd *Ambrette* in *France*. This *Pear* is like the *Leſchaſſerie* in Shape, but is of a Ruſſet Colour; the Eye is larger, and more hollow'd; the Fleſh is melting, and the Juice is richly ſugar'd and perfum'd; the Seeds are large and black, and the Cells in which they are lodged are very large; the Wood is very thorny, eſpecially when grafted on free Stocks. The Fruit is in eating the latter End of *November*, and continues good till the latter End of *January*, and is eſteem'd a very good Fruit by moſt People.

58. Pyrus; *ſativa, fructu brumali, magno, pyramidato, albido, in ore liqueſcente, ſaccharato, odorato. Tourn.* Epine d' Hyver, *i. e.* Winter Thorn Pear. This is a large fine *Pear*, nearly of a pyramidal Figure; the Skin is ſmooth, and of a pale-green Colour, inclining to yellow as it ripens; the Stalk is ſhort and ſlender; the fleſh is melting and buttery; the Juice is very ſweet, and, in a dry Seaſon, is highly perfum'd; but when it is planted on a moiſt Soil, or the Seaſon proves wet, it is very inſipid, ſo that it ſhould never be planted on a ſtrong Soil. It ripens the End of *November*, and will continue good two Months.

59. Pyrus; *ſativa, fructu brumali, longo, e viridi flaveſcente, in ore liqueſcente. Tourn.* La Saint Germain, *i. e.* The Saint Germain Pear. It is alſo call'd *L' inconnue de la Fare, i. e.* The Unknown of La Fare; it being firſt diſcover'd upon the Banks of a River which is call'd by that Name, in the Pariſh of *St. Germain.* This is a large long *Pear*, of a yellowiſh green Colour when ripe; the Fleſh is melting, and very full of Juice, which, in a dry Seaſon, or if planted on a warm, dry Soil, is very ſweet; but when it is planted on a moiſt Soil, the Juice is very apt to be harſh and auſtere, which renders it leſs eſteem'd by ſome Perſons, though in general it is greatly valu'd. This is in eating the End of *November*, but will many times continue good till *Chriſtmas*.

60. Pyrus; *ſativa, fructu brumali, tuberoſo, ſubacido, flaveſcente punctato. Tourn.* Saint Auguſtine. This is about the Size of a midding *Virgoulé Pear*, but is ſomewhat ſhorter, and ſlenderer near the Stalk; the Skin is of a fine Citron Colour, ſpotted with Red on the Side next the Sun; the Fleſh is tender, but not buttery, and is pretty full of Juice, which is often a little ſharp, which to ſome Perſons is diſagreeable, but others value it on that account. This is in eating in *December*, and will continue good two Months.

61. Pyrus; *ſativa, fructu brumali, pyramidato, partim purpureo, punctis nigris conſperſo, paritm flaveſcente. Tourn.* Bon Chrêtien d' Eſpagne, *i. e.* The Spaniſh Bonchretien. This is a large *Pear* of a pyramidal Form; of a fine Red or Purple Colour on the Side next the Sun, and full of ſmall black Spots; the other Side is of a pale yellow Colour; the Fleſh is breaking, and when it is on a light rich Soil, and grafted on a free Stock, its Juice is very ſweet. It ripens in the Beginning of *December*, and will continue good a Month or ſix Weeks. If this be grafted on a *Quince* Stock, it is very apt to be dry and ſtony.

62. Pyrus; *ſativa, fructu brumali, magno, oblongo, turbinato, ferrugineo, utrinque umbilicato. Tourn.* Poire de Livre, *i. e.* The Pound Pear. It is alſo call'd *Groſs Ratteau Gris, i. e.* The Grey Rak'd Pear; and *Poire d' Amour, i. e.* The Lovely Pear. This is a very large *Pear*, each of which does commonly weigh a Pound or more; the Skin is rough, and of an obſcure red Colour on the Side next the Sun, but ſomewhat paler on the other Side; the Stalk is very ſhort, and the Eye is greatly hollow'd. This is not fit for eating, but bakes or ſtews exceedingly well, and is in Seaſon from *November* to *Chriſtmas*.

63. Pyrus; *ſativa, fructu brumali, parvo, flaveſcente, maculis rubris conſperſo. Tourn.* Beſy de Caſſoy, *i. e.* The Wilding of Caſſoy, a Foreſt in *Brittany*, where it was diſcover'd, and paſſes under the Name of *Rouſſet d' Anjou.* It is alſo call'd *Petit Beurre d' Hyver, i. e.* Small Winter Butter Pear. This is a ſmall roundiſh *Pear*, of a yellowiſh Colour ſpotted with Red; the Fleſh is melting, and the Juice is very rich. It is in eating in *December* and *January*. This is a prodigious Bearer, and commonly produces its Fruit in large Cluſters, provided it be not too much pruned, for it generally produces its Bloſſom-buds at the Extremity of its Shoots, which if ſhorten'd, the Fruit would be cut away. There

was a Tree of this Kind in the Gardens of *Camden-Houſe* near *Kenigton,* which generally produc'd great Quantity of Fruit.

64. PYRUS; *ſativa, fructu brumali, turbinato, inaquali ventre tumido, partim purpureo, partim flaveſcente. Tourn.* Ronville. It is alo call'd *Hocrenaille*, and *Martinire, i. e.* The Lord Martyn Pear. This *Pear* is about the Size and hape of a large *Rouſſelet*; the Eye s of a middling Size, and hollow'd little; the Middle of the *Pear* is enerally ſwell'd more on one Side han of the other, but is equally xtended towards the Stalk; the Skin is very ſmooth and ſoft, and s of a lively red Colour next the un; but on the other Side it hanges yellow as it ripens; the leſh is breaking, and full of Juice, which is very ſweet, and a little erfum'd; but if grafted on a *Quince* Stock, is very apt to be ſmall and tony.

65. PYRUS; *ſativa, fructu brumali, Citriformi, flaveſcente, duro, Moſchato, odoratiſſimo. Tourn.* Citron d' Hyver, *i. e.* The Winter Citron Pear. It is alſo call'd the *Musk Orange Pear* in ſome Places. This is a pretty large *Pear*, in Shape and Colour very like a *Citron*, from whence it had its Name; the Fleſh is hard and dry, and very ſubject to be ſtony, for which Reaſons it is not valued as an eating *Pear*, but will bake very well. It is in Seaſon from *December* to *March*.

66. PYRUS; *ſativa, fructu brumali, oblongo, e viridi flaveſcente, ſaccharato, ſaporis auſteri. Tourn.* Roſſelet d' Hyver, *i. e.* The Winter Roſſelet. This is by ſome ſuppoſ'd to be the ſame *Pear* as is call'd the *Dry Martin*; but it is very different from that in ſeveral Particulars: The Colour of this is a greeniſh Yellow; the Stalk is long and ſlender, and the Fleſh is buttery and melting, and generally full of Juice, which is very ſweet, but the Skin is apt to contain an auſtere Juice; ſo that if it be not pared, it is apt to be diſagreeable to many Perſons Palates. It is in eating in *January* and *February*.

67. PYRUS; *ſativa, Pictavienſis, fructu brumali, globoſo, ſeſſili, ſaccharato, odorato. Tourn.* Poire Portail, *i. e.* The Gate Pear. This *Pear* was diſcover'd in the Province of *Poitou*, where it was ſo much eſteem'd, that they preferr'd it to moſt other Fruit; tho', in the Opinion of the moſt curious Judges, it does not deſerve the great Character which is given to it, for it rarely happens that it proves good for eating, being generally dry, ſtony, and hard, unleſs in extraordinary Seaſons, and upon a very good Soil. This muſt always be grafted on a free Stock, and ſhould be planted on a light rich Soil, and in very dry Seaſons the Trees ſhould be water'd, otherwiſe the Fruit will be ſtony. It is in Seaſon from *January* to *March*, and bakes well.

68. PYRUS; *ſativa, fructu brumali, magno, globoſo, flaveſcente, punctis rufis conſperſo. Tourn.* Francreal. It is alſo call'd *Fin-Or d'Hyver, i. e.* The Golden End of Winter. This is a very large *Pear*, almoſt of a globular Figure; the Skin is yellow, ſpotted with red; the Stalk is ſhort, and the Wood of the Tree mealy: The Fleſh of this *Pear* is dry, and very apt to be ſtony, but it bakes exceeding well, and continues good from *January* till *March*.

69. PYRUS; *ſativa, fructu brumali, turbinato, ſeſſili, ſubacido flaveſcente, punctis aſperioribus conſperſo. Tourn.* Bergamotte Bugi: It is

alſo called *Bergamotte de Paſque, i. e.* The Eaſter Burgamot. It is a large *Pear*, almoſt round, but is a little produc'd in Length towards the Stalk; the Eye is flat, and the Skin is green, having many rough Protuberances like Spots diſpers'd all over, but as it ripens it becomes yellowiſh; the Fleſh is breaking, and in a good Seaſon the Juice is ſweet, but it muſt have a free Stock, a South-Eaſt Wall, and a good Soil, otherwiſe it is apt to be ſtony and auſtere. It is in Eating from *February* till *April*.

70. Pyrus; *ſativa, fructu brumali, magno, pyramidato, e flavo non nihil rubente. Tourn.* Bonchrêtien d'Hyver, *i. e.* The Winter Bonchretien Pear. This *Pear* is very large and long, of a pyramidal Figure; the Skin is of a yellowiſh Colour, but the Side next the Sun inclines to a ſoft Red; the Fleſh is tender and breaking, and is very full of rich ſugar'd Juice. This is eſteem'd in *France* one of the beſt Winter *Pears*; but in *England* it is ſeldom ſo good: tho' I am fully ſatisfy'd, if it were grafted on a free Stock, and planted in a good Soil, againſt a Wall expos'd to the South-Eaſt, and the Branches train'd at full Length, it might be render'd more acceptable than it is at preſent in *England*.

71. Pyrus; *ſativa, fructu brumali, magno, Cydoniæ facie, partim flavo, partim purpureo. Tourn.* Catillac *or* Cadillac. This is a large *Pear* ſhap'd ſomewhat like a *Quince*; the Skin is for the moſt Part of a yellow Colour, but changes to a deep Red on the Side next the Sun: The Fleſh is hard, and the Juice auſtere; but it is one of the beſt Fruits for Baking yet known, and being a plentiful Bearer, deſerves a Place in every good Collection of Fruit. It will be good from *Chriſtmas* to *April*, or longer.

72. Pyrus; *ſativa, fructu brumali, oblongo, flaveſcente, punctis rubris conſperſo.* La Paſtourelle. This *Pear* is of the Size and Shape of a fine *Rouſſelet*; the Stalk is ſhort and crooked; the Skin is ſomewhat rough, of a yellowiſh Colour, ſpotted with Red; the Fleſh is tender and buttery; and when it grows on a dry Soil, the Juice is very ſweet; but on a wet Soil, or in moiſt Years, it is ſubject to have an auſtere Taſte. This *Pear* is in Eating in *February* and *March*.

73. Pyrus; *ſativa, fructu brumali, ſeſſili, partim flaveſcente, partim purpuraſcente. Tourn.* La double Fleur, *i. e.* The Double-flowering Pear. This is ſo call'd, becauſe the Flowers have a double Range of Petals or Leaves. It is a large ſhort *Pear*, the Stalk is long and ſtrait, the Skin is very ſmooth, and of a yellowiſh Colour, but the Side next the Sun is commonly of a fine red or purple Colour. This is by ſome eſteem'd for eating, but 'tis generally too auſtere in this Country for that Purpoſe. It is the beſt *Pear* in the World for Baking or Compoſts. It is good from *February* to *May*.

74. Pyrus; *ſativa, fructu brumali, oblongo, partim flaveſcente, partim purpuraſcente.* St. Martial. It is alſo call'd in ſome Places *Poire Angelique, i. e.* The *Angelick Pear*. This *Pear* is oblong, and has a very long Stalk; the Skin is ſmooth and yellowiſh, but on the Side next the Sun, it turns to a purpliſh Colour; the Fleſh is tender and buttery, and the Juice is very ſweet. This is in Eating in *February* and *March*.

75. Pyrus; *ſativa, fructu brumali oblongo, partim albido, partim*

purpureo, odorato ſaccharato. La Poire Chaumontelle, *or* Beſi de Chaumontelle, *i. e.* The Wilding of Chaumontelle. This *Pear* is in ſhape ſomewhat like the *Autumn Buerrè*, but is flatter at the Crown; the Skin is a little rough, of a pale green Colour, but turns to a purpliſh Colour next the Sun; the Fleſh is melting, the Juice is very rich, and a little perfum'd. It is in Eating from *March* to *June*, and is eſteem'd the beſt late *Pear* yet known

76. Pyrus; *ſativa, fructu brumali, globoſo, ſeſſili, cinereo, maculis amplis, obſcurioribus conſperſo. Tourn.* Carmelite. This is a middle-ſiz'd *Pear*, of a roundiſh Form; the Skin is of a grey Colour on one Side, but is inclining to a Red on the other, having ſome broad Spots of a dark Colour all over; the Fleſh is commonly hard and dry, ſo that it is not very much eſteem'd. It is in Seaſon in *March*.

77. Pyrus; *ſativa, fructu brumali, maximo, pyramidato, dilutè virente.* The Union Pear; otherwiſe call'd Dr. *Uvedale*'s *St. Germain*. This is a very large long *Pear*, of a deep green Colour, but the Side next the Sun doth ſometimes change to a Red as it ripens. This is not fit for eating, but bakes very well; and being a great Bearer and a very large Fruit, deſerves a Place in every good Collection. It is in Seaſon from *Chriſtmas* to *April*.

There are many other Sorts of *Pears* which are ſtill continu'd in ſome old Gardens, but as thoſe here mention'd are the beſt Sorts known at preſent, ſo it would be needleſs to enumerate a great Quantity of ordinary Fruit, ſince every one who intends to plant Fruits, will rather chuſe thoſe which are the moſt valued, the Expence and Trouble being the ſame for a bad Sort of Fruit as a good one: Indeed I have inſerted many more than are really worth planting, in order to pleaſe ſuch who are fond of a great Variety; but whoever hath a Mind to make Choice of ſuch only as are good, may eaſily diſtinguiſh them, by attending to the Account given of each Sort, and hereby every Perſon is at Liberty to pleaſe himſelf; for it is not every one who prefers a *Buerre Pear*, tho' that is generally eſteem'd the very beſt in its proper Seaſon: There are ſome who admire the *Meſſire Jean*, for the Firmneſs of its Fleſh, which to others is a great Objection againſt it; ſo that as ſome eſteem the Breaking, and others the Melting *Pears*, I have diſtinguiſh'd them by their Deſcriptions in ſuch a Manner, that every one may make Choice of the Kinds of Fruits which are agreeable to their Palates; and the different Seaſons in which each Kind is in eating, being exhibited (allowing a little for the Difference of Seaſons, which are earlier ſome Years than others) it is not very difficult for a Perſon to make a Collection of good *Pears* to ſucceed each other throughout the Seaſon of theſe Fruits, both for Eating and Baking.

Pears are propagated by budding or grafting them upon Stocks of their own Kind, which are commonly call'd *Free-Stocks*, or upon *Quince-Stocks*, or *White-Thorn*; upon all which theſe Fruits will take; but the latter ſort of Stock is now ſeldom uſed, becauſe they rarely keep Pace in their Growth, with the Fruit budded or grafted upon them; as alſo becauſe the Fruit upon ſuch Stocks are commonly drier and more apt to be mealy than when they are upon *Pear-Stocks*. *Quince-Stocks* are greatly uſed in the Nurſeries for all ſorts of *Pears* which are deſign'd for Dwarfs or Walls, in order to check the Luxuriancy of their Growth, ſo that they may be kept within Compaſs better than upon Free-Stocks: But againſt the general Uſe of theſe Stocks, for all ſorts of *Pears* indifferently, there are very great Objections: 1ſt, Becauſe ſome ſorts of *Pears* will not thrive upon theſe Stocks, but in two or three Years will decay, or at moſt will but juſt keep alive. 2dly, All the Sorts of hard breaking *Pears* are render'd ſtony and good for little; ſo that whenever any of theſe Sorts are injudiciouſly raiſ'd, the Fruit, altho' the Kind be ever ſo good, is condemn'd as good for nothing by ſuch as are not well acquainted with it, when the Fault is intirely owing to the Stock on which it was grafted. On the contrary, all melting buttery *Pears* are greatly improv'd by being upon *Quince-Stocks*, provided they are planted on a ſtrong Soil; but if the Ground be very dry and gravelly, no ſort of *Pear* will do well upon *Quince-Stocks* in ſuch Places.

Theſe general Directions being given, there is no Occaſion to repeat any Part of the Method in which theſe Stocks are raiſ'd, and the Fruits budded or grafted thereon; which has been already mention'd under the Article of *Nurſeries*.

The Diſtance which theſe Trees ſhould be planted either againſt Walls or Eſpaliers, muſt not be leſs than twenty Feet; but if they are planted twenty-five Feet, it will be better; for if they have not Room to ſpread on each Side, it will be impoſſible to preſerve them in good Order (eſpecially thoſe on Free-Stocks) for the more theſe Trees are prun'd, the more they will ſhoot; and, as I before ſaid, many Sorts of *Pears* do produce their Bloſſom-buds firſt at the Extremity of the former Year's Shoots, ſo that when they are ſhorten'd, the Fruit will be cut away; and this cannot be avoided, where the Trees have not Room allow'd in their firſt planting.

The Manner of preparing theſe Trees for Planting, is the ſame as hath been directed for other Fruit-trees, *viz.* To cut off all the ſmall Fibres from the Roots, and to ſhorten ſome of the longeſt Roots, and cut off all the bruis'd ones, or ſuch as ſhoot downright: This being done, you ſhould plant 'em in the Places intended at the before-mention'd Diſtance. The beſt Time to plant theſe Trees (if upon a middling or dry Soil) is in *October*, leaving their Heads on till Spring, which ſhould be faſten'd to the Walls or Stakes, to prevent the Wind from diſturbing their Roots; and in the beginning of *March* their Heads ſhould be cut off, in the Manner already directed for *Peaches* and other Fruit-trees; obſerving alſo to lay ſome Mulch upon the Surface of the Ground about their Roots when they are planted; as hath been ſeveral times already directed for other Trees.

The firſt Summer after planting, the Branches ſhould be train'd to the Wall or Eſpalier (againſt which they are planted) in a horizontal Poſition, as they are produc'd without ſhortening of them; and the *Michaelmas* following theſe Shoots ſhould be ſhorten'd down to five or ſix Eyes, in order to obtain a ſufficient Quantity of Branches to furniſh the lower Part of the Wall or Eſpalier: But when this is done, the Shoots ought not to be ſhorten'd unleſs where there is want of Branches to fill a Vacancy; for whenever the Shoots are ſtopp'd, it occaſions the Buds immediately below the Cut, to ſend forth two or more Shoots, whereby there will be a Confuſion of Branches, and rarely any Fruit is produc'd with this Management.

The Diſtance which the Branches of *Pears* ſhould be train'd, muſt be proportiond to the Size of their Fruit: Such Sorts whoſe Fruit are ſmall, may be allow'd five or ſix Inches; but the larger Sorts muſt not be leſs than ſeven or eight Inches aſunder: If this be duly obſerv'd, and the Branches carefully train'd horizontally as they are produc'd, there will be no Occaſion for ſo much cutting as is commonly practis'd on theſe Trees, which inſtead of checking their Growth, does, on the contrary, cauſe them to ſhoot the ſtronger.

It is very ſurprizing to read the tedious Methods which moſt of the Writers on Fruit-trees have directed for pruning of theſe Trees; for by their prolix and perplex'd Methods, one would imagine they had endeavour'd to render themſelves as unintelligible as poſſible: And this I am ſure may be affirm'd, that it is next to impoſſible for a Learner ever to arrive at any tolerable Skill in Pruning, by the tedious and perplex'd Directions which are publiſh'd by Monſieur *Quintiney*, and thoſe who have copied from him; for theſe have all ſet out wrong in the Beginning, by allowing their Trees leſs than half the Diſtance at which they ſhould be planted; and then have preſcribed Rules to keep them within that Compaſs, which is what cannot be effected, where Perſons are deſirous of having Plenty of Fruit.

I ſhall therefore only lay down a few neceſſary Directions for the Pruning and Managing of theſe Trees, which ſhall be done in as few Words as poſſible, that a Learner may the more eaſily underſtand it, and which (together with proper Obſervations) will be ſufficient to inſtruct any Perſon in the right Management of them.

Pear-trees do generally produce their Bloſſom-buds firſt at the Extremity of the laſt Year's Shoots, ſo that if theſe are ſhorten'd, the Bloſſoms are cut off: But this is not all the Damage, for (as I before ſaid) this occaſions the Buds immediately below the Cut to put forth two or more Shoots, whereby the Number of Branches will be increas'd, and the Tree crowded too much with Wood; beſides, thoſe Buds which by this Management do produce Shoots, would have only produced *Curſons* and *Spurs*, upon which the Bloſſom-buds are produced, if the leading Branch had not been ſhorten'd; therefore theſe ſhould never be ſtopped, unleſs to furniſh Wood to fill a Vacancy.

It is not neceſſary to provide a new Supply of Wood in *Pear-trees*, as muſt be done for *Peaches*, *Nectarines*, *&c.* which only produce their Fruit upon young Wood; for *Pears* do produce their Fruit upon *Curſons or Spurs*, which are produced upon Branches which are three or four Years old, which *Curſons* do continue fruitful many Years; ſo that where theſe Trees have been ſkilfully managed, I have ſeen Branches which have been train'd horizontally, upwards of twenty Feet from the Trunk of the Tree, and have been fruitful their whole Length. And if we do but carefully obſerve the Branches of a healthful Standard Tree, which has been permitted to grow without Pruning, we ſhall find many that are ten or twelve Years old, or more, which are very full of theſe *Curſons*, upon which is annually a good Number of Fruit produced.

During the Summer Seaſon theſe Trees ſhould be often look'd over, to train in the Shoots as they are produced, regularly, to the Wall or Eſpalier, and to diſplace foreright and luxuriant Branches as they ſhoot out, whereby the Fruit will be equally expos'd to the Air and Sun, which will render them more beautiful, and better taſted, than when they are ſhaded by the Branches; and by thus managing the Trees in Summer, they will always appear beautiful, and in Winter they will want but little Pruning.

Where *Pear-trees* are thus regularly trained, without ſtopping of their Shoots, and have full Room for their Branches to extend on each Side, there will never be any Occaſion for disbarking of the Branches, or cutting off the Roots (as hath been directed by ſeveral Writers on Gardening) which Methods, however they may anſwer the Intention for the preſent, yet will certainly greatly injure the Trees, as muſt all violent Amputations, which ſhould ever be avoided, as much as poſſible, on Fruit-trees; and this, I am ſure, can never be wanted, where Trees have been rightly planted, and regularly trained, while young.

The Seaſon for pruning of theſe Trees, is any time after the Fruits are gathered, until the Beginning of *March*, but the ſooner it is done, after the Fruit is gathered, the better, for Reaſons already given for pruning of *Peach-trees*; though indeed, the deferring of theſe until Spring, where there are large Quantities of Trees to prune, is not ſo injurious to them, as to ſome more tender Fruits.

All the Sorts of Summer *Pears* will ripen very well, either on Standards, Dwarfs, or Eſpaliers; as will all the Autumn *Pears*, upon Dwarfs or Eſpaliers: But where a Perſon is very curious in his Fruit, I would always adviſe the Planting them againſt Eſpaliers, in which Method they take up but little Room in a Garden, and if they are well managed, do appear very beautiful, and the Fruit is larger and better taſted than thoſe produced on Dwarfs, as hath been already obſerved. But all the Sorts of Winter *Pears* muſt be planted againſt Eaſt, South-Eaſt, or South-Weſt Walls, otherwiſe they ſeldom ripen well in *England*.

In the Gathering of *Pears* great Regard ſhould be had to the Bud which is formed at the Bottom of the Footſtalk, for the next Year's Bloſſoms, which by forcing off the *Pear*, before it be mature, is many times ſpoiled; for during the Time the Fruit is growing, there is always a Bud formed by the Side of the Footſtalk, upon the ſame Spur for the next Year's Fruit; ſo that when the *Pears* are ripe, if they are gently turned upwards, the Footſtalk will readily part from the Spur without injuring of the Bud.

The Seaſon for gathering all Summer *Pears* is juſt as they ripen, for none of theſe will remain good above a Day or two after they are taken from the Tree; nor will many of the Autumn

Pears keep good above ten Days or a Fortnight after they are gathered. But the Winter Fruits ſhould hang as long upon the Trees as the Seaſon will permit; for they muſt not receive the Froſt, which will cauſe them to rot, and render their Juices flat and ill-taſted; but if the Weather continues mild until the Middle of *October*, it will then be a good Seaſon for gathering them in, which muſt always be done in dry Weather, and when the Trees are perfectly dry.

In the doing of this you ought carefully to avoid bruiſing them, therefore you ſhould have a broad, flat Basket to lay 'em in as they are gathered; and when they are carried into the Store-Room, they ſhould be taken out ſingly, and each Sort laid up in a cloſe Heap, on a dry Place, in order to ſweat, where they may remain for eight or ten Days, during which Time the Windows ſhould be open, to admit the Air, in order to carry off all the Moiſture which is perſpired from the Fruit; after this, the *Pears* ſhould be taken ſingly, and wiped dry with a woollen Cloth, and then pack'd up in cloſe Baskets, obſerving to put ſome ſweet Wheat Straw in the Bottoms and round the Sides of the Baskets, to prevent their bruiſing againſt the Basket; you ſhould alſo obſerve to put but one Sort of Fruit into a Basket, leſt by their different Fermentations, they ſhould rot each other; but if you have enough of one Sort to fill a Basket which holds two or three Buſhels, it will be ſtill better. After you have fill'd the Baskets, you muſt cover them over with Wheat Straw very cloſe, and faſten them down, then place theſe Baskets in a cloſe Room, where they may be kept dry, and from Froſt, but the leſs Air is let into the Room, the better the Fruit will keep: It will be very neceſſary to fix a Label to each Basket, denoting the Sort of Fruit therein contained, which will ſave the Trouble of opening them, whenever you want to know the Sorts of Fruit; beſides, they ought not to be opened before their Seaſon to be eaten, for the oftner they are opened and expoſed to the Air, the worſe they will keep. I don't doubt but this will be objected to by many, who imagine Fruit can't be laid too thin, for which Reaſon they make Shelves to diſpoſe them ſingly upon, and are very fond of admitting freſh Air, whenever the Weather is mild, ſuppoſing it very neceſſary to preſerve the Fruit; but the contrary of this is found true, by thoſe Perſons who have large Stocks of Fruit laid up in their Store-Houſes in *London*, which remain cloſely ſhut up for ſeveral Months, in the Manner before related; and when theſe are opened, the Fruit is always found plumper and ſounder than any of thoſe Fruits which were preſerved ſingly upon Shelves. For, as Mr. *Boyle* obſerves, the Air is the Cauſe of Putrefaction, and in order to prove this, that honourable Perſon put Fruits of ſeveral Kinds into Glaſſes where the Air was exhauſted, in which Places they remained ſound for ſeveral Months, but upon being expos'd to the Air, did rot in a very ſhort Time; which plainly ſhews the Abſurdity of the common Method now uſed to preſerve Fruit.

QU

QUAMOCLIT; Bindweed.

The *Characters* are;

The Flower conſiſts of one Leaf, ſhaped like a Funnel, and divided at the Top into ſeveral Segments; from the Flower-cup riſes the Pointal, which afterwards becomes a roundiſh Fruit, incloſing ſeveral oblong Seeds.

We have but one *Species* of this Plant in *England*, which is,

QUAMOCLIT; *foliis tenuiter inciſis & pennatis. Tourn. Quamoclit* with very fine, cut, winged Leaves, *commonly called* in *Barbados*, Sweet-William.

This Plant is very common in *Jamaica, Barbados,* and the *Caribbee* Iſlands, where it climbs upon Buſhes, Hedges, or whatever grows near it, and produces great Quantities of beautiful Scarlet Flowers, almoſt of the Figure of a ſmall Convolvulus Flower, but the Tube being much larger, and the Seeds being of a different Figure from thoſe of the *Convolvulus*, Monſieur *Tournefort* hath ſeparated it from that *Genus*. The Seeds of this Plant are generally brought into *England* every Spring, from the *Weſt-Indies*: They ſhould be ſown on a Hot-bed in *March*, and when the Plants are come up, they muſt be planted each into a ſmall Pot, fill'd with light, ſandy Earth, and plunged into a freſh Hot-bed, to bring the Plants forward: As the Plants advance in Heighth, ſo they ſhould be removed into larger Pots, and Sticks placed down by them, for 'em to climb upon; they muſt alſo be removed to a freſh Hot-bed, when the old one has loſt its Heat; and when the Plants are too high to be contain'd under Frames, they ſhould be removed into the Stove, where, if they are plunged into a moderate Hot-bed of Tanners Bark, and not too much drawn, they will produce a great Quantity of beautiful Scarlet Flowers, and ripen their Seeds very well; but if they are expos'd to the open Air, they ſeldom flower in this Country. This Plant continues but one Year, the Root periſhing ſoon after the Seeds are ripe.

QUERCUS; The Oak-Tree.

The *Characters* are;

It hath Male Flowers (or Katkins) which conſiſt of a great Number of ſmall ſlender Threads; the Embryo's, which are produc'd at remote Diſtances from theſe, on the ſame Tree, do afterwards become Acorns, which are produc'd in hard, ſcaly Cups: To which may be added, the Leaves are ſinuated.

The *Species* are;

1. QUERCUS; *latifolia. Park. Theat.* The common Oak.

2. QUERCUS; *latifolia, mas, quæ brevi pediculo eſt. C. B. P.* Oak with the Acorns on ſhort Footſtalks.

3. QUERCUS; *latifolia, foliis ex albo eleganter variegatis.* The ſtrip'd Oak.

4. QUERCUS; *latifolia, perpetuò virens. C. B. P.* The broad-leav'd ever-green Oak.

5. QUERCUS; *calice echinato, glande majore. C. B. P.* Oak with large Acorns having prickly Cups.

6. QUERCUS; *humilis, Gallis binis, ternis aut pluribus ſimul junctis. C. B. P.* Dwarf Oak, *vulgò.*

7. QUERCUS; *Virginiana, rubris venis muricata. Pluk. Phyt.* The Virginian Scarlet Oak.

8. Quercus; *Caſtanea foliis, procera Arbor, Virginiana. Pluk. Phyt.* Virginian Oak, with Cheſnut Leaves.

9. Quercus; *alba, Virginiana. Park. Theat.* The white or iron Oak of Virginia.

10. Quercus; *Virginiana, ſalicis longiore folio, fructu minimo. Pluk. Amalth.* Virginian Willow-leav'd Oak.

11. Quercus; *pumilis, Caſtanea folio Virginienſis. Pluk. Almag.* The Chinquapin Oak.

The two firſt Sorts are common in *England*, but the Sort whoſe Acorns grow on ſhort Footſtalks, is leſs frequent than the other. I have ſeen ſeveral Trees of that Kind near *Dulwich* in *Surry*, but whether the Acorns of this Sort will produce Trees of the ſame Kind, I cannot determine. The Sort with ſtrip'd Leaves was obtain'd by Accident, but may be propagated by budding or grafting it upon the common Oak; the Leaves of this are generally variegated with white in a moſt beautiful Manner, and the Tree is eſteem'd a great Curioſity by ſuch as delight in variegated Plants.

The fourth Kind deſerves a Place in Wilderneſſes, amongſt other Sorts of ever-green Trees, where it will make a beautiful Appearance, but the Timber is not near ſo good as that of the common Sort.

The fifth Kind was originally brought into *England* from *Spain*, but is hardy enough to endure the Cold of our Winters very well: This is preſerved by ſuch as are curious in collecting the ſeveral Kinds of Trees.

The other Sorts have been brought from *America*, (where there are a Variety of different *Oaks*) and are very hardy: Many of them are of quicker Growth than the common Sort, and although their Timber is not ſo good, yet they deſerve a Place in large Wilderneſſes, where they will afford an agreeable Variety. As theſe Trees are propagated from Acorns, ſo thoſe Perſons who are deſirous to cultivate 'em, ſhould endeavour to obtain the Acorns freſh from *America*, which muſt be put up in Sand, to preſerve them during their Paſſage; and when they arrive in *England*, they ſhould be put into the Ground immediately, otherwiſe they do ſeldom grow.

Beſides the Sorts of *Oaks* here-mentioned, there are divers others which are produced in ſeveral Parts of *Europe*, and differ in the Shape and Size of their Leaves and Fruit; but theſe are not to be found in any of our *Engliſh* Plantations at preſent; though, when I was at *Leyden* in *Holland*, in the Year 1727, I ſaw above forty Sorts of *Oaks*, in the curious Garden of the learned Dr. *Boerhaave*, near *Leyden*, moſt of which were in a very proſperous Condition, and had endured the Cold of that Climate two or three Years, in the open Air; ſo that if theſe were procured in *England*, they would be equally as hardy as the common Sort, and add to the Variety of our Plantations.

All the Sorts of *Oaks* are propagated from Acorns, which ſhould be ſown as ſoon as poſſible, when they are ripe; for if they are kept long out of the Ground, they ſeldom grow.

The Manner of ſowing theſe Acorns (if deſigned for a ſmall Plantation, to be removed) is, to prepare a Bed or two of freſh Earth, neither too ſtrong and heavy, nor too light and dry; in theſe Beds you ſhould place the Acorns about two Inches aſunder, covering them about two Inches thick, with the ſame freſh Earth, obſerving to leave none of them uncover'd to entice the Vermin, which may, in a ſhort Time, deſtroy all the Seeds.

In the Spring, when the Plants begin to appear, you muſt carefully clear them from Weeds, and if the Seaſon proves dry, you ſhould refreſh them now and then with a little Water, which will greatly promote their Growth. In theſe Beds the Plants ſhould remain until the following Spring, (obſerving conſtantly to keep them clear from Weeds) at which Time you ſhould prepare a Spot of good freſh Earth, (in Size proportionable to the Quantity of Plants) which ſhould be well trenched and levelled; then toward the Middle or latter End of *March*, you ſhould carefully take up the Plants, ſo as not to injure their Roots, and plant them out in Rows three Feet aſunder, and eighteen Inches Diſtance Plant from Plant, obſerving never to ſuffer the Plants to abide long out of the Ground, becauſe their Roots would dry and endanger the Growth of the Plants.

When they are planted, you ſhould lay a little Mulch upon the Surface of the Ground, near their Roots, to prevent the Earth from drying too faſt; and if the Seaſon be very dry, you ſhould give them a little Water to ſettle the Earth to their Roots.

If theſe Things are carefully obſerved, there will not ſo many of the Plants miſcarry, as do generally in the common Method: For few Perſons conſider either the proper Method or Seaſon for removing theſe Trees; moſt People imagining it may be perform'd with equal Succeſs, any time after the Leaves begin to decay: but this is a very wrong Opinion; for, from ſeveral Experiments which I have made, in tranſplanting of theſe Trees in various Seaſons, I find they always ſucceed beſt when they are tranſplanted juſt before they begin to ſhoot; at which Seaſon there will very few fail, provided they are removed with Care.

When the Plants have taken Root in this Nurſery, they will require little more Care than to keep 'em clear from Weeds, and dig the Ground between the Rows every Spring; in doing of which you ſhould cut off ſuch Roots as extend very far from the Trunk of the Trees, which will render them better for tranſplanting again: You ſhould alſo prune off ſuch Side-Branches as do extend themſelves very far, and would retard the upright Shoot, but you ſhould by no means cut off all the ſmall lateral Branches, ſome of which are abſolutely neceſſary to be left on, to detain the Sap for the Augmentation of the Trunk; for I have often obſerved, where Trees have been thus cloſely pruned, that their Heads have over-grown their Bodies, ſo that they have bent downward, and become crooked.

When theſe Trees have remain'd in the Nurſery three or four Years, they will then be large enough to tranſplant to the Places where they are to remain; for it is not proper to let them grow very large before they are planted out, becauſe theſe are very hazardous Trees to remove when old, or after they have taken deep Root.

The Seaſon for this Work is (as I ſaid) juſt before they begin to ſhoot in the Spring, at which Time, if they are carefully taken up, there will be little Danger of their ſucceeding. When they are planted,

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Time, laying them thin in ſome open Room to dry; after which they may be put up in dry Sand, and preſerved in a dry Place until the End of *January*, when you ſhould prepare the Ground for planting them.

The Manner of doing this, when the Plantation is very large, ſhould be, to dig ſquare Spots about two Feet over, at every ten Feet Diſtance, into each of which you ſhould put four or five ſound Acorns, about two Inches deep, being careful to cover them all over, leſt by leaving any of them above Ground, the Vermin ſhould be enticed, and thereby the greateſt Part of the Plantation ſhould be deſtroy'd. When the whole Plantation is finiſhed, it will be of great Service to ſtick into each Plot a few ſmall Buſhes, which will protect the Plants when they appear above Ground, from Cattle, and alſo from the Injury of Weather; and when the Plants are come up, the Weeds ſhould be carefully clean'd away from them during the growing Seaſon, which will greatly promote their Growth; and the following Spring, juſt before the Plants begin to ſhoot, you ſhould take them all up, except two of the moſt thriving out of each Plot (which may be tranſplanted into another Place, if you have occaſion for them); but in doing of this, you ſhould be very careful not to diſturb the Roots of the remaining Plants; and it will be very neceſſary to renew the Buſhes about them where they are loſt, to protect them from Cattle; and the following Summer they ſhould be kept clear from Weeds.

In this manner they may remain three or four Years, (obſerving every Spring to dig and looſen the Earth about their Roots, which will be of great Service to them) by which time you will eaſily judge which of the two Plants left in each Plot, is likely to make the beſt Tree, ſo that the other ſhould now be taken away, being very careful how you dig near the remaining Plants, leſt you ſhould injure their Roots, and if at this time you find any of them with very crooked unſightly Stems, you may cut them down near the Surface of the Ground, and if their Roots are ſtrong, they will ſend forth ſtrait vigorous Shoots the following Summer, and make kindly handſome Plants.

When theſe Plants are advanced out of the Reach of Cattle, they will require but little more Care, except to prune off any ſtrong lateral Branches, where they are produced, in order to ſtrengthen the leading Shoot; but you ſhould by no means be too buſy in pruning theſe Trees, which will greatly retard their Growth. The Expence of ſuch Plantations is but ſmall, eſpecially where Labour is cheap, and the Profits which muſt ariſe from them, to the Succeſſors of thoſe who are ſo beneficent to their Poſterity, as to lay out a ſmall Share of their Fortune this Way, will be very great; but as this has been fully treated of by Mr. *Evelyn*, ſo I ſhall not repeat it in this Place, but refer the Curious to his valuable Treatiſe of *Foreſt-Trees*, where they will find enough ſaid to encourage all Gentlemen of Eſtates, to lay out ſome of their preſent Fortune, to enrich their Families.

QUICK, delights in a Ground that is more dry than wet, (for watery Places it abhors.) Plant *Quick* in the following Manner:

Let the firſt Rows of Sets be plac'd in a Trench of about half a Foot deep, even with the Top of the Ditch, in ſomewhat a ſloping or inclining Poſture; then having rais'd the Bank near a Foot upon them, plant another Row ſo as their Tops may juſt peep out over the Middle of the Spaces of the firſt Row: Theſe cover again to the Height and Thickneſs of the other, and place a third Rank oppoſite to the firſt, and then finiſh the Bank to its intended Height.

The Diſtances of the Plants ſhould not be above one Foot; and the Seaſon to do the Work in, may be from the Beginning of *February* till the End of *March*, or elſe in *September* to the Beginning of *December*.

When this is finiſh'd, you muſt guard both the Top of the Bank, and the utmoſt Verge of the Ditch with a ſufficient dry Hedge interwoven from Stake to Stake into the Earth (which commonly they do on the Bank) to ſecure the *Quick* from the Spoil of Cattle.

You muſt alſo be careful to repair ſuch as decay, the following Spring, by ſupplying the dead, and trimming the reſt; and after three Years Growth, intermix ſome Timber-trees amongſt them, ſuch as *Oak*, *Aſh*, *Beech*, *Maple*, *Fruit* or the like; which being drawn young out of the Nurſeries may be very eaſily inſerted.

Some, indeed, object againſt ſcattering theſe Maſts and Keys among Fences, which being grown, overtop the Hedge that grows under it, and may prejudice it with their Shade and Drip: But this may be prevented by planting *Hollies* (which are Proof againſt theſe Impediments) in the Line or Trench where you would raiſe Standards, as far as they uſually ſpread in many Years, and which, if plac'd at good

Diſtances, how cloſe ſoever to the Stem, would (beſides their ſtout Defence) prove a great Decoration to large and ample Incloſures.

In *February* or *October*, with a ſharp Hand-bill, cut away all ſuperfluous Sprays and Stragglers; then ſearch out the principal Stems, and with a keen and light Hatchet cut them ſlant-wiſe cloſe to the Ground hardly three-quarters through, or rather ſo far only as till you can make them comply handſomely, leſt you rift the Stem; and ſo lay it from you ſloping as you go, folding in the leſſer Branches which ſpring from them; and ever within five or ſix Feet Diſtance, where you find an upright Set, (cutting off only the Top to the Height of your intended Hedge) let it ſtand as a Stake, to fortify your Work, and to receive the twining of thoſe Branches about it.

Laſtly, at the Top, (which ſhould be about five Feet above Ground) take the longeſt, moſt ſlender and flexible Twigs which you reſerv'd, and (being cut as the former, where Need requires) bind in the Extremities of all the reſt; and thus your Work is finiſh'd.

This being done very cloſe and thick, makes an impregnable Hedge in few Years, for it may be repeated as you ſee Occaſion; and what you ſo cut away, will help to make your dry Hedges for your young Plantations, or will be uſeful for the Oven, and make good *Bavin*, eſpecially the extravagant Side-branches, which will ſpring upright, till the newly-wounded are healed.

There are ſome who would have no Stakes cut from the Trees, ſave here and there one, ſo as to leave half the Head naked, and the other ſtanding, but the over-hanging Boughs will kill what is under them and ruin the Tree, ſo pernicious is this Half-topping.

There is nothing more prejudicial to under-growing young Trees than when newly trimmed and pruned, to have their (as yet raw) Wounds poiſon'd with continual dripping.

Thomas Franklin, Eſq; has given the following Account of his Method of planting *Quick*.

He firſt ſet out the Ground for Ditches and *Quick* ten Feet in Breadth; he ſubdivided that, by marking out two Feet and a half on each Side (more or leſs at Pleaſure) for the Ditches, leaving five in the Middle between them; then digging up two Feet in the Midſt of that five Feet, he planted the Sets in; which although it required more Labour and Charge, he ſays, he ſoon found it repaid the Coſt: This done, he began to dig the Foſſes, and to ſet up one Row of Turfs on the Outſide of the ſaid five Feet; namely, one Row on each Side thereof, the green Side outmoſt, a little reclining, ſo as the Graſs might grow.

After this, returning to the Place he began at, he order'd one of the Men to dig a Spit of the under Turf-mould, and lay it between the Turfs placed edgewiſe as before deſcrib'd, upon the two Feet which was purpoſely dug in the Middle, and prepar'd for the Sets, which the Planter ſets with two *Quicks* upon the Surface of the Earth almoſt upright, whilſt another Workman laid the Mould forwards about twelve Inches, and then ſet two more, and ſo continued.

This being finiſh'd, he order'd another Row of Turfs to be placed on each Side upon the Top of the former, and fill'd the Vacancy between the Sets and Turfs as high as their Tops, always leaving the Middle, where the Sets were planted, hollow, and ſomewhat lower than the Sides of the Banks by eight or ten Inches, that the Rain might deſcend to their Roots; which is of great Advantage to their Growth, and by far better than by the old Ways, where the Banks are too much ſloping, and the Roots of the Set are ſeldom wetted even in a moiſt Seaſon the Summer following: But if it prove dry, many of the Sets, eſpecially the late planted, will periſh; and even few of thoſe that had been planted in the latter End of *April*, (the Summer happening to be ſomewhat dry) eſcap'd.

The Planting being thus advanc'd, the next Care is *Fencing*; by ſetting a Hedge of about twenty Inches high upon the Top of the Bank on each Side thereof, leaning a little outwards from the Sets, which will protect them as well (if not better) than a Hedge of three Feet, ſtanding on the Surface of the Ground, ſo as no Cattle can approach the dead Head to prejudice it, unleſs they ſet their Feet in the Ditch it ſelf, which will be at leaſt a Foot deep; and from the Bottom of the Foſs to the Top of the Hedge, about four Feet and a half, which they can hardly reach over to crop the *Quick*, as they might in the old Way; and beſides, ſuch an Hedge will endure a Year longer.

He ſays, he had an Hedge which had ſtood five Years. And tho' nine or ten Feet were ſufficient for both Ditches and Banks, yet where the Ground is but indifferent, it is better Husbandry to take twelve Feet, which will allow of a Bank at leaſt ſix Feet broad, and gives more Scope to place the dead Hedges farther from the Sets, and the Ditches being ſhallow, will, in two Years time, graze.

As to the Objection, that taking twelve Feet waſtes too much Ground, he affirms, That if twelve Feet in Breadth be taken for a Ditch and Bank, there will no more Ground be waſted than by the common Way; for in that a *Quick* is rarely ſet but there is nine Feet between the dead Hedges, which is intirely loſt all the Time of fencing; whereas with double Ditches there remain at leaſt eighteen Inches on each Side where the Turfs were ſet on edge, that bear more Graſs than when it lay on the flat.

But admitting it did totally lay waſte three Feet of Ground, the Damage were very inconſiderable, ſince forty Perch in Length, two hundred and twenty Yards, which makes Perches 7, 25″, 9′, or 7 Pole ½; which, at 13 *s.* and 4 *d.* the Acre, amounts not to 7 *d* ½ *per Annum*.

Now, that this is not only the beſt but cheapeſt Way of *Quick-ſetting*, will appear by comparing the Charge of both.

In the uſual Way, the Charge of a three Foot Ditch is four Pence *per* Pole, the Owner providing Sets; if the Workman finds them, he will have for making the ſaid Ditch, and ſetting them, eight Pence *per* Pole, and for Hedging, two Pence, that is, for both Sides four Pence the Pole; which renders the Charge of Hedging, Ditching, and Sets, twelve Pence the Pole, that is, for forty Rod in Length, forty Shillings.

Then one Load of Wood out of the Copſe coſts (with Carriage, tho' but two or three Miles Diſtance) ten Shillings, which will ſeldom hedge above eight Pole (ſingle Hedge);

Hedge); but allowing to do ten, to fence forty Pole, there muſt be at leaſt eight Load of Wood, which coſts four Pounds, making the whole Expence for Ditching, Fencing and Setting forty Pole, to be ſix Pounds, reckoning with the leaſt; for ſcarce any will undertake to do it for leſs than three Shillings and ſix Pence *per* Pole, and then the forty Pole coſts ſeven Pounds.

Whereas with double Ditches, both of them *Setting* and *Sets*, will be done for eight Pence the Pole, and the Husbandman get as good Wages as with the ſingle Ditch, (for though the Labour about them is more, yet the making the Table is ſav'd) which coſts one Pound ſix Shillings and eight Pence; and the Hedges being low, they will make better Wages at Hedging for a Penny a Pole, than at two Pence for common Hedges; which comes to ſix Shillings and eight Pence; for hedging forty Pole on both Sides: Thus, one Load of Wood will fence thirty Pole at leaſt, and forty hedged with two Thirds of Wood leſs than in the other Way, and coſt but one Pound ſix Shillings and eight Pence, which makes the other whole Charge of Sets, Ditching, Fencing, and Wood but three Pounds.

QUICK BEAM; *vide* Sorbus Sylveſtris.

QUINCE TREE; *vide* Cydonia.

QUINCUNX ORDER; is a Plantation of Trees, diſpos'd originally in a Square, conſiſting of five Trees, one at each Corner, and a fifth in the Middle; which Diſpoſition repeated again and again, forms a regular Grove, Wood or Wilderneſs: and when view'd by an Angle of the Square or Parallelogram, preſents equal or parallel Alleys.

Trees planted in *Quincunx*, are ſuch as are planted in the following Form:

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*   *   *   *   *

QUINQUEFOLIUM; Cinquefoil.

There are many *Species* of this Plant which are preſerv'd in *Botanick Gardens*, for Variety, (ſome of which grow wild in divers Parts of *England*) but as they are never propagated either for Uſe or Beauty, ſo I ſhall not trouble the Reader with an Enumeration of their ſeveral Names.

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RADISH; *vide* Raphanus.

RADISH, HORSE; *vide* Cochlearia.

RAMPIONS; *vide* Campanula radice, eſculente.

RANUNCULUS; Crowfoot.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves, which are placed in a circular Order, and expand in Form of a Roſe; having, for the moſt part, a many-leav'd Empalement or Flower-cup; out of the Middle of the Flower riſes the Pointal, which afterwards becomes a Fruit, either round, cylindrical, or ſpiked; to the Axis of which, as a Placenta, *adhere many Seeds, for the moſt part naked.*

The *Species* are;

1. Ranunculus; *hortenſis, erectus, flore pleno. C. B. P.* Common yellow Crowfoot, with a double Flower.

2. Ranunculus; *repens, flore pleno. J. B.* Common creeping Crowfoot with a double Flower.

3. Ranunculus; *Montanus, aconiti folio, albus, flore minore. C. B. P.* Mountain Crowfoot, with a white Flower.

4. Ranunculus; *folio aconiti, flore albo, multiplici. C. B. P.* Crowfoot with a Monk's-hood Leaf and a double white Flower, *commonly called*, The Fair Maid of *France*.

5. Ranunculus; *bulboſus, flore pleno. C. B. P.* Common bulbous-rooted Crowfoot, with a double Flower.

6. Ranunculus; *Conſtantinopolitanus, flore ſanguineo, pleno. J. B.* Common *Ranunculus*, with a double bloody Flower.

7. Ranunculus; *aſphodeli, radice prolifer, miniatus. C. B. P.* *Ranunculus* with an Aſphodel Root, and Childing Carmine Flowers, *commonly called*, Turks Turban.

8. Ranunculus; *Aſiaticus polyclonos, ſive grumoſa radice ſecundus. J. B.* Aſiatick *Ranunculus* with many Heads and a grumoſe Root, *commonly called* Sphericus.

9. Ranunculus; *Aſphodeli radice, flore ſanguineo maximo. H. R. Par.* Aſphodel-rooted *Ranunculus*, with a very large red Flower, *commonly called* The Monſter.

10. Ranunculus; *Aſphodeli radice, flore ſubphœnicio rubente. C. B. P.* Aſphodel-rooted *Ranunculus*, with purpliſh-red Flowers, *commonly called* Marvelia.

11. Ranunculus; *Aſphodeli radice, flore luteo variegato. H. R. Par.* Aſphodel-rooted *Ranunculus*, with a Yellow variegated Flower.

12. Ranunculus; *Alepus, grumoſa radice, flore lineis rubris & luteis ſtriato. H. R. Par.* Grumoſe-rooted Crowfoot, with a Flower ſtrip'd with red and yellow Lines, *commonly called* Ranunculus of *Aleppo*.

13. Ranunculus; *Aſphodeli radice, flore flavo, venis rubris diſtincto; Boſvell dictus. H. R. Par.* Crowfoot with an Aſphodel Root, and yellow Flower with red Veins, *commonly called* Boſvel.

14. Ranunculus; *Alepus grumoſa radice, flore miniato, per oras luteo. H. R. Par.* Aleppo Crowfoot with a grumoſe Root and a Carmine Flower bordered with Yellow.

15. Ranunculus; *flore pleno, flaveſcente, & rubris lineis elegantiſſimè variegato. H. R. Par.* Crowfoot with a double yellow Flower, curiouſly ſtrip'd with red Lines, *commonly called* Aurora.

16. Ranunculus; *Aſphodeli radice, flore pleno, albo, parvo, rubris ſtriis diſtincto. H. R. Monſp.* Crowfoot with an Aſphodel Root, and a ſmall double white Flower ſtrip'd with red.

17. Ranunculus; *Aſphodeli radice, flore pleno, magno, lacteo, ſuperius lituris rubris eleganter picto. Boerh. Ind.* Crowfoot with an Aſphodel Root, and a large double white Flower, mark'd above with red Spots, *commonly called*, The Seraphick.

Theſe are moſt of them old Flowers, which have been long cultivated in the *Engliſh* Gardens. The five firſt-mention'd Sorts are very hardy Plants, and will thrive extremely well in ſhady Borders; theſe require no other Culture, but to take up their Roots every other Year, when their Leaves decay, and part 'em, planting out the Off-ſets in other Borders, leſt by permitting them to grow too large, they rot each other. The creeping Sort will require to be oftner tranſplanted, otherwiſe it will ſpread

every thing that grows near
Theſe do all produce hand-
double Flowers, which con-
long in Beauty, and afford
greeable Variety, and being
, are worthy of a Place in
good Garden.

e other Sorts were originally
ght from *Turkey*, and were
rly in great Eſteem in *Eng-*
but of late Years there have
introduced many other Sorts
different Kind, from *Perſia*,
gſt which are many with
double Flowers, which pro-
Seeds, from which there are
prodigious Varieties of new
ers annually obtain'd, which
o large, and of ſuch Variety
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l theſe very double Flowers
never produce Seeds, ſo that
are only multiplied by Off-
from their Roots, which they
rally produce in good Plenty,
anted in a good Soil, and duly attended in Winter. The Seaſon for planting their Roots is any time in *October*, for if they are planted ſooner, they are apt to come up in a ſhort Time, and grow pretty rank before Winter, whereby they will be in greater Danger of ſuffering by Froſt; and if they are planted much later, they will be in Danger of periſhing under-ground; ſo that if you keep them out of the Ground any longer than the Beginning of *November*, it will be the better Way to defer the Planting of them 'till the latter End of *January*, or the Beginning of *February*, after the great Froſts are paſt.

The Beds in which theſe Roots are planted, ſhould be made with freſh, light, ſandy Earth, at leaſt a Foot deep: The beſt Soil for theſe Roots may be compos'd in the following Manner, *viz.* Take a Quantity of freſh Earth from a rich upland Paſture, about ſix Inches deep, together with the Green-ſward; this ſhould be laid in a Heap to rot for twelve Months before it is uſed, obſerving to turn it over very often, to ſweeten it, and break the Clods; to this you ſhould add a proportionable Quantity of Sea or Drift Sand, according as the Earth is lighter or ſtiffer; if it be light and inclining to a Sand, one Load of Sand will be ſufficient for four Loads of Earth; but if the Earth is ſtrong and heavy, the Sand ſhould be mix'd in equal Quantity therewith; but you ſhould often turn it over, in order to unite their Parts well together, before it is put into the Beds.

The Depth which this ſhould be laid in the Beds (as was before ſaid) muſt be about a Foot, this ſhould be below the Surface, in Proportion to the Dryneſs or Moiſture of the Place where they are ſituated; which in dry Ground ſhould be eight Inches below the Surface, and the Beds rais'd four Inches above; but in a moiſt Place, they ſhould be ſix Inches below, and ſix above the Ground; and in this Caſe it will be very proper to lay ſome Rubbiſh and Stones in the Bottom of each Bed, to drain off the Moiſture. This Earth I would by no means have ſcreened very fine, but only in turning it over each Time, you ſhould be careful to break the Clods, and throw out all large Stones, which will be ſufficient, for if it is made very fine, when the great Rains in Winter come on, it will cauſe the Earth to bind into one ſolid Lump, whereby the Moiſture will be detain'd, and the Roots not being able to extend their tender Fibres, will rot: Of this I have ſeen many Examples, but one particularly to my Coſt; when I had procured a fine Parcel of theſe Roots from abroad, and being deſirous of having them thrive very well, I took great Pains to ſcreen the Earth of my Beds very fine, which I laid near two Feet deep, and planted a good Part of my Roots therein; but the Seaſon advancing, and having a great deal of other Buſineſs upon my Hands, I did not ſcreen the Earth of all my Beds, but planted ſome of them without doing any thing more than raking them; and the Succeſs was, that the Roots in thoſe Beds which were ſcreened, did, great Part of them, entirely rot, and the remaining Part were ſo weak, as not to produce any good Flowers; whereas thoſe which were planted in the Beds which were not ſcreened, did thrive and flower very well, and ſcarce any of the Roots fail'd, tho' the Earth of all the Beds was the ſame, and were in the ſame Situation, both with regard to Wind and Sun; ſo that the Damage which thoſe Roots ſuſtain'd, was owing entirely to the Fineneſs of the Earth; and this I have ſeveral times ſince obſerved in other Gardens.

The Beds being thus prepared, ſhould lie a Fortnight to ſettle, before the Roots are planted, that there may be no Danger of the Earth ſettling unequally after they are planted, which would prejudice the Roots, by having hollow Places in ſome Parts of the Bed, to which the Water would run and lodge, and ſo rot the Roots in ſuch Places. Then having levelled the Earth, laying the Surface a little rounding, you ſhould mark out the Rows by a Line, at about four Inches Diſtance each Way, ſo that the Roots may be planted every Way in ſtrait Lines; then you ſhould open the Earth with your Fingers, at each Croſs, where the Roots are to be planted, about two Inches deep, placing the Roots exactly in the Middle, with their Crowns upright, then with the Head of a Rake you ſhould draw the Earth upon the Surface of the Bed level, whereby the Top of the Roots will be about an Inch covered with Earth, which will be ſufficient at firſt: This Work ſhould be done in dry Weather, becauſe the Earth will then work better than if it were wet; but the ſooner after Planting there happens to be Rain, the better it will be for the Roots; for if it ſhould prove dry Weather long after, and the Earth of the Beds be very dry, the Roots will be ſubject to mould and decay; therefore in ſuch a Caſe it will be proper to give a little Water

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ſtrengthen their Flowers. When the Flowers are paſt, and the Leaves are withered, you ſhould take up the Roots, and carefully clear 'em from the Earth, then ſpread them upon a Mat to dry, in a ſhady Place, after which they may be put up in Bags or Boxes in a dry Room, until the *October* following, which is the Seaſon for Planting them again.

Thus having directed how theſe Sorts are to be cultivated, I ſhall proceed to treat of the *Perſian* Kinds, in which I ſhall only mention in what Particulars theſe are to be treated different from thoſe already mentioned.

Theſe Flowers are not only propagated by Off-ſets from the old Roots, as the former, but are alſo multiplied by Seeds, which the ſemi-double Kinds do produce in Plenty. Therefore whoever is deſirous to have theſe in Perfection, ſhould annually ſow their Seeds, from which new Varieties will be every Year produced; but in order hereto, you ſhould be careful in ſaving the Seed, or in procuring it from ſuch Perſons as underſtand how to ſave it; that is, who will be careful not to leave any Flowers for Seeds, but ſuch as have three or four Rows of Petals at leaſt, and are well coloured; for ſince theſe Flowers do increaſe ſo plentifully, it is not worth the Trouble to ſow any indifferent Seeds, becauſe there can be but little Hopes of obtaining any good Flowers from ſuch Seeds.

Being prepared with Seeds, about the Middle of *Auguſt*, which is the proper Seaſon for ſowing of them, you ſhould get ſome large Pots, flat Seed-pans or Boxes (of either as many as you have Seeds to ſow) theſe ſhould be filled with light, ſandy, rich Earth, levelling the Surface very even; then ſow the Seeds thereon pretty thick, and cover it about a Quarter of an Inch thick with the ſame light Earth; after which you ſhould remove theſe Pots into a ſhady Situation, where they may have the Morning Sun until ten of the Clock; and if the Seaſon ſhould prove dry, you muſt often refreſh 'em with Water, being very careful in doing of this, ſo as not to waſh the Seeds out of the Ground. In this Situation the Pots ſhould remain until the Beginning of *October*, by which Time the Plants will begin to come up (though ſometimes the Seeds will remain in the Earth until *November*, before the Plants appear) when you ſhould remove the Pots into a more open Expoſure, where they may have full Sun, which at that Time is neceſſary to exhale the Moiſture of the Earth; but toward the Middle of *November*, when you are apprehenſive of Froſt, the Pots ſhould be removed under a common Hot-bed Frame, where they may be covered with the Glaſſes in the Night-time and in bad Weather, but in the Day, when the Weather is mild, they ſhould be entirely opened, otherwiſe the Plants will draw up too weak: the only Danger they are in, is from violent Rains and Froſts, the firſt often rotting the tender Plants, and the Froſt will often turn them out of the Ground, therefore they ſhould be carefully guarded againſt both of theſe.

In the Spring, as the Seaſon grows warm, ſo theſe Pots ſhould be expos'd to the open Air, placing them at firſt near the Shelter of a Hedge, to protect them from the cold Winds; but towards the latter End of *March*, or the Beginning of *April*; they ſhould be remov'd again into a more ſhady Situation, according to the Warmth of the Seaſon; and if it ſhould prove dry, they muſt be ſometimes refreſh'd with Water; but you ſhould be careful not to give it to 'em in great Quantities, which is very apt to rot theſe tender Roots: and in the Middle or latter End of *April*, they ſhould be plac'd where they may have only the Morning Sun: in which Place they may remain till their Leaves decay: when they may be taken out of the Earth, and the Roots dry'd in a ſhady Place; after which they may be put up in Bags, and preſerv'd in a dry Place until the *October* following; when they muſt be planted in the Manner before directed for the old Roots.

The Spring following, theſe Roots will flower; at which time you ſhould carefully mark ſuch of them as are worthy to be preſerv'd: and the ſingle or bad-colour'd Flowers may be pull'd up and thrown away, which is the ſureſt Method of removing them from the good Sorts; for if they are permitted to remain together until their Leaves decay, there may be ſome Off-ſets of the bad Sorts mix'd with the good Flowers. You ſhould not ſuffer thoſe Flowers which you intend to blow fine the ſucceeding Year, to bear Seeds, but cut off the Flowers when they begin to decay; for thoſe Roots which have produc'd Seeds, do ſeldom flower well afterwards, nor will the principal old Root, which has flower'd ſtrong, ever blow ſo fair as will the Off-ſets, which is what ſhould be principally obſerv'd, when a Perſon purchaſes any of theſe Roots; and a great Part of the Complaints made by thoſe who have bought theſe Roots at a dear Rate, is principally owing to this; for the Perſons who ſold them being appriz'd of this Matter, have parted with their old Roots to their Purchaſers, and reſerv'd the Off-ſets for their own Uſe; which old Roots have often ſo much degenerated from what they were the preceeding Year, as to cauſe a Suſpicion, whether the Perſons they were purchas'd from had not chang'd the Roots; and this Degeneracy always attends theſe Flowers, after having flower'd extremely large and fair, or that they have been permitted to ſeed: So that it is abſolutely neceſſary to ſow Seeds every Year, in order to preſerve a Succeſſion of good Flowers.

The Soil which theſe delight moſt in, is a rich, light, ſandy Earth; but whatever Dung is added to the Earth, ſhould be very rotten, and ought to be mix'd with the Earth at leaſt ſix Months before it be us'd: During which Time it ſhould be often turn'd over to mix the Parts well together; and the lighter this Earth is, the better will the Flowers thrive: But, as I before ſaid, it is by no means adviſeable to ſift or ſcreen it too fine, for the Reaſons already given. Some there are who mix rotten Tan, or Saw-duſt with their Earth, to render it light; but this is alſo bad for theſe Flowers, as I have ſeveral times experienc'd, eſpecially if either of theſe be not ſo rotten as to have quite loſt its Appearance, and reduc'd to Earth: for tho' the Roots will often come up very ſtrong, and flouriſh very vigorouſly till the Beginning of *February*; yet at that Seaſon it is very common to have them die off in large Patches: Which, when I have obſerv'd, I have ſearch'd to the Bottom of the Roots, and found ſome Part of the Tan or Saw-duſt lying near them, which has detain'd the Moiſture, and thereby rotted the Roots.

The Manner of preparing the Beds, and the Diſtance and Method of planting the Roots, being exactly the ſame as hath been already directed for the old Sorts, I ſhall not repeat it here, but will only obſerve, that theſe Flowers being more tender than the others, muſt be protected from hard Froſts and cutting ſharp Winds, eſpecially after *Chriſtmas*, when their Flower-buds are forming; for if they are neglected at that Seaſon, their Flowers will rarely prove fair; nor ſhould you ſuffer them to receive too much Wet in Winter or Spring, which is equally as injurious to them as Froſt. In planting of theſe Roots you ſhould obſerve to place the ſemi-double Kinds, from which you intend to ſave Seeds, in ſeparate Beds by themſelves, and not intermix them with the double Flowers, becauſe they will require to be treated in a different manner; for when the Flowers of the ſemi-double Kinds begin to fade, you ſhould carefully guard them from Wet; for if they are permitted to receive hard Rains, or are water'd at that Seaſon, the Seeds do rarely come to Maturity, or are ſo weak, that ſcarce one in fifty of them will grow.

When the Seed begins to ripen (which may be eaſily known by ſeparating from the Axis, and falling) you ſhould look it over every Day, gathering it as it ripens, for there will be a conſiderable Diſtance in the Seeds of the ſame Bed coming to Maturity, at leaſt a Fortnight, and ſometimes three a greater Diſtance than ten Inches or a Foot, becauſe large Roots are not ſo generally eſteem'd for the Table.

In order to ſave good *Turnip-Seeds*, you ſhould tranſplant ſome of the faireſt Roots in *February*, placing them at leaſt two Feet aſunder each Way, obſerving to keep the Ground clear from Weeds, until the *Turnips* have ſpread ſo as to cover the Ground, when they will prevent the Weeds from growing; and when the Pods are form'd, you ſhould carefully guard them againſt the Birds, otherwiſe they will devour it, eſpecially when it is near ripe; at which time, you ſhould either ſhoot the Birds as they alight upon the Seed, or lay ſome bird-lim'd Twigs upon it, whereby ſome of them will be caught, and if they are permitted to remain ſome time, and afterwards turn'd looſe, they will prevent the Birds from coming there again for ſome time, as I have experimented. When the Seed is ripe, it ſhould be cut up, and ſpread to dry in the Sun; after which it may be thraſhed out, and preſerved for Uſe.

RAPHANUS; Radiſh.

The *Characters* are;

The Flower conſiſts of four Leaves, which are plac'd in Form of a Croſs; out of the Flower-cup riſes the Pointal, which afterwards turns to a Pod in Form of a Horn, that is thick, ſpungy, and furniſh'd with a double Row of roundiſh Seeds, which are ſeparated by a thin Membrane.

The *Species* are;

1. Raphanus; *minor, oblongus. C. B. P.* Small oblong *or* common Radiſh.

2. Raphanus; *niger, major, rotundus. Mor. Hiſt.* Great round black Radiſh, *commonly call'd*, The Spaniſh Radiſh.

3. Raphanus; *major, orbicularis, floribus candidis. C. B. P.* Great Round-rooted Radiſh, with white Flowers.

4. Raphanus; *minus, oblongus, pyriformis, vulgô Ramurazza. Hort. Cath.* The leſſer Radiſh, with an oblong Pear-ſhap'd Root.

5. Raphanus; *major, orbicularis, vel rotundus. C. B. P.* Greater Radiſh, with a round Root.

The firſt Sort here mention'd, is that which is commonly cultivated in Kitchen-Gardens for its Root; of which there are ſeveral Varieties, as the Small-topp'd, the Deep-red, and the Long-topp'd ſtriped *Radiſh*; all which are Varieties ariſing from Culture: The Small-topp'd Sort is moſt commonly preferr'd by the Gardeners near *London*, becauſe they require much leſs Room than thoſe with large Tops, and may be left much cloſer together: And as the forward *Radiſhes* are what produce the greateſt Profit to the Gardener, ſo theſe being commonly ſown upon Borders near Hedges, Walls, or Pales, if they are of the large-topp'd Sort, they will be apt to grow moſtly to Top, and not ſwell ſo much in the Root as the other, eſpecially if they are left pretty cloſe.

The Seaſons for ſowing this Seed are various, according to the Time when they are deſir'd for Uſe: But the earlieſt Seaſon is commonly toward the latter End of *October*, that the Gardeners near *London* ſow them to ſupply the Market; and theſe, if they do not miſcarry, will be fit for Uſe in *March* following, which is full as ſoon as moſt People care to eat them. Theſe (as I ſaid before) are commonly ſown on warm Borders, near Walls, Pales, or Hedges, where they may be defended from the cold Winds.

The ſecond Sowing is commonly about *Chriſtmas*, provided the Seaſon be mild, and the Ground in a fit Condition to work: Theſe, are alſo ſow'd near Shelter, but not ſo near Pales or Hedges, as the firſt Sowing: Theſe, if they are not deſtroy'd by Froſt, will be fit for Uſe the Beginning of *April*: But in order to have a Succeſſion of theſe Roots for the Table through the Seaſon, you ſhould repeat ſowing of their Seeds once a Fortnight, from the Middle of *January* till the Beginning of *April*, always obſerving to ſow the latter Crops upon a moiſt Soil, and an open Situation, otherwiſe they will run up, and grow ſticky before they are fit for Uſe.

Many of the Gardeners near *London* ſow *Carrot-Seed* with their early *Radiſhes*; ſo that many times when their *Radiſhes* are kill'd, the *Carrots* will remain; for the Seeds of *Carrots* commonly lie in the Ground five or ſix Weeks before they come up; and the *Radiſhes* ſeldom lie above a Fortnight under Ground; ſo that theſe are often up, and kill'd, when the *Carrot-Seed* remains ſafe in the Ground: But when both Crops ſucceed, the *Radiſhes* muſt be drawn off very young, otherwiſe the *Carrots* will be drawn up ſo weak as not to be able to ſupport themſelves when the *Radiſhes* are gone.

It is alſo a conſtant Practice with theſe Gardeners, to mix *Spinach-Seed* with their latter Crop of *Radiſhes*; ſo that when the *Radiſhes* are drawn off, and the Ground clean'd between the *Spinach*, it will grow prodigiouſly, and in a Fortnight's-time will as completely cover the Ground as tho' there had been no other Crop: And this *Spinach*, if it be of the broad-leav'd Kind, will be larger and fairer than it commonly is when ſown by itſelf; becauſe where People have no other Crop mix'd with it, they commonly ſow it too thick, whereby it is drawn up weak: But here the Roots ſtand pretty far apart, ſo that after the *Radiſhes* are gone, they have full Room to ſpread, and if the Soil be good, it is a prodigious Size this *Spinach* will grow to before it runs up for Seed: But this Husbandry is chiefly practis'd by the Gardeners who pay very dear for their Land, and are oblig'd to have as many Crops in a Year as poſſible; otherwiſe they could not afford to pay ſuch large Rents.

When the *Radiſhes* are come up, and have got five or ſix Leaves, they muſt be pull'd up where they are too cloſe, otherwiſe they will draw up to Top, but the Roots will not increaſe their Bulk: In doing of this, ſome only draw them out by Hand; but the beſt Method is to hoe them with a ſmall Hoe, which will ſtir the Ground, and deſtroy the young Weeds, and alſo promote the Growth of the Plants. The Diſtance which theſe ſhould be left, if for drawing up ſmall, may be three Inches; but if they are to ſtand until they are pretty large, ſix Inches is full near enough; and a ſmall Spot of Ground will afford as many *Radiſhes* at each ſowing, as can be ſpent in a Family while they are good.

If you intend to ſave Seeds of your *Radiſhes*, you ſhould, about the Beginning of *May*, prepare a Spot of Ground in Proportion to the Quantity of Seeds intended (but you ſhould always make Allowance for bad Seaſons, becauſe it often happens, in a very dry Seaſon, that there will not be a fourth Part of the Quantity of Seeds upon the ſame Proportion of Ground as there will be in a moiſt Seaſon:) This Ground ſhould be well dug and levell'd; then you ſhould draw up ſome of the ſtraiteſt and beſt colour'd *Radiſhes* (throwing away all ſuch as are ſhort, and that branch out in their Roots:) Theſe ſhould be planted in Rows three Feet diſtance, and two Feet aſunder in the Rows, obſerving, if the Seaſon be dry, to water them until they have taken Root; after which they will require no farther Care but only to hoe down the Weeds between them, until they are advanc'd ſo high, as to ſpread over the Ground, when they will prevent the Growth of Weeds.

When the Seed begins to ripen, you ſhould carefully guard it againſt the Birds, who will otherwiſe deſtroy it: When it is ripe (which you may know by the Pods changing brown) you ſhould cut it, and ſpread it in the Sun to dry; after which you ſhould threſh it out, and lay it up for Uſe, where the Mice cannot come to it, otherwiſe they will eat it up.

The ſmall round-rooted *Radiſh* is not very common in *England*, but in many Parts of *Italy* it is the only Sort cultivated: The Roots of this Kind are many times as large as a ſmall *Turnip*, and are very ſweet. This may be propagated in the ſame manner as the common Sort; but only with this Difference, *viz.* That this muſt not be ſown till the Beginning of *March*, and the Plants allow'd a greater Diſtance. The Seeds of this Kind are very ſubject to degenerate when ſav'd in *England*, ſo that it is proper to have them from Abroad every Year.

The other round-rooted *Radiſhes* are rarely cultivated in *England*, but thoſe who have a mind to have them, may ſow them in the ſame manner as the laſt.

The *Black Spaniſh Radiſh* is only cultivated for Medicinal Uſe in *England:* The Seeds of this may be ſown in *May*, and when the Plants come up, they ſhould be hoed out, ſo as to leave the remaining ones ten Inches or a Foot aſunder; after which they muſt be conſtantly cleared from Weeds in Summer, and in Autumn they will be fit for Uſe.

RAPUNTIUM; Rampions, *or* Cardinal's Flower.

The *Characters* are;

The Flower conſiſts of one Leaf, which is of an anomalous Figure, hollowed like a Pipe, and furrow'd or channell'd, divided as it were into many Parts, in the Shape of a Tongue, defended by a Vagina or Covering, which enfolds the Pointal: When the Flowers decay, the Flower-cup turns to a Fruit, divided into three Cells, full of ſmall Seeds, which adhere to a Placenta, which is divided into three Parts.

The *Species* are;

1. RAPUNTIUM; *maximum, coccineo, ſpicato flore. Col. in Rech.* Greater *Rampions*, with a Crimſon-ſpiked Flower, *commonly call'd*, The Scarlet Cardinal's Flower.

2. RAPUNTIUM; *Americanum, flore dilutè cæruleo. H. R. Par.* The Blue Cardinal's Flower.

3. RAPUNTIUM; *Americanum, virgæ aureæ foliis, parvo flore cæruleo. Tourn.* Cardinal's Flower, with Golden-Rod Leaves, and a ſmall Blue Flower.

There are ſeveral other Varieties of this Plant growing in divers Parts of *America*; but thoſe here mention'd are all which I have obſerv'd cultivated in *England*. The firſt Sort is greatly priz'd by the Curious for the Beauty of its rich Crimſon Flowers, which exceed all the Flowers I have yet ſeen, in the Deepneſs of its Colour: And theſe commonly, when their Roots are ſtrong, produce large Spikes of theſe Flowers, which continue a long time in Beauty, and make a moſt magnificent Shew amongſt other Flowers. The Time of their Flowering is commonly in *July* and *Auguſt*, and if the Autumn proves very favourable, they will ſometimes produce good Seeds in *England*. Theſe Plants are Natives of *Virginia* and *Carolina*, where they grow by the Sides of Rivulets, and make a moſt beautiful Appearance; from whence the Seeds are often ſent into *England*. Theſe Seeds do commonly arrive here in the Spring; at which Time they ſhould be ſown in Pots fill'd with light Earth, and but juſt cover'd over, for if the Seeds are bury'd deep, they will not grow: Theſe Pots ſhould be placed under a Frame to defend them from Cold until the Seaſon is a little advanc'd, but they ſhould not be plac'd on a Hot-bed, which will alſo deſtroy the Seeds.

When the Weather is warm, towards the Middle of *April*, theſe Pots ſhould be plac'd in the open Air, in a Situation where they may have the Morning-Sun till twelve o'Clock, obſerving to water them conſtantly in dry Weather; and when the Plants come up, they ſhould be tranſplanted each into a ſmall Pot fill'd with freſh light Earth, and plac'd in the ſame Situation, obſerving to water them in dry Weather; and in Winter they ſhould be plac'd under a Hot-bed Frame, where they may be ſhelter'd from ſevere Froſts; but in mild Weather, they ſhould be as much expos'd to the open Air as poſſible.

The *March* following, theſe Plants ſhould be put into larger Pots fill'd with the ſame freſh Earth, and plac'd, as before, to the Morning-Sun, obſerving to water them in dry Weather, which will cauſe them to flower ſtrong the Autumn following.

Theſe Plants are alſo propagated by parting of their Roots: The beſt Seaſon for which is, either ſoon after they are paſt Flower, or in *March*, obſerving to water and manage them, as hath been directed for the Seedling Plants, both in Winter and Summer.

The Blue Sort does conſtantly produce ripe Seeds in *England*, which ſhould be ſown ſoon after they are ripe; in the Spring following the Plants will come up, when they ſhould be tranſplanted and managed as the other Sort, with which Culture this will alſo agree. This is preſerv'd for Variety; but the Flowers are not near ſo beautiful as thoſe of the former Sorts.

The other Sort, with ſmall Blue Flowers, is a biennial Plant, periſhing as ſoon as the Seeds are ripe. This may be rais'd in the ſame Manner as the former, but is ſcarcely worthy of a Place in a Flower-garden.

RHABARBARUM MONACHORUM; *vide* Lapathum.

RHAMNOIDES; The Sea Buckthorn.

The *Characters* are;

It hath the whole Appearance of the Buckthorn, *but is Male and Female in different Trees: The Flowers of the Male have no Petals; the Flower-cup conſiſts of two Leaves,* *in the Center of which are ſeveral ſmall Stamina: The Female Trees produce roundiſh Berries, each of which contains a ſingle Seed.*

The *Species* are;

1. Rhamnoides; *florifera, ſalicis foliis. T. Cor.* Male Willow-leav'd Sea Buckthorn.

2. Rhamnoides; *fructifera, foliis ſalicis, baccis leviter flaveſcentibus. T. Cor.* Female Willow-leav'd Sea Buckthorn, with yellow Berries.

Theſe Plants do grow in great Plenty upon the Sea-Coaſts of *Lincolnſhire*, and at *Sandwich*, *Deal* and *Folkſton* in *Kent*, as alſo in divers Parts of *Scotland*.

They are preſerv'd in ſeveral Gardens near *London* for Variety; where, being intermix'd with other Shrubs of the ſame Growth, they afford an agreeable Proſpect.

Theſe Shrubs are eaſily propagated from Suckers, which they ſend forth in great Plenty from the old Plants. Theſe Suckers may be taken off any time in *February* or *March*, and planted in a Nurſery, where they may be train'd up for two or three Years; after which they may be remov'd to the Places where they are to remain. There is no very great Beauty in theſe Plants, but as their Leaves and Flowers are very different from moſt other Trees, ſo they make a pretty Variety in ſmall Wilderneſs-Quarters; or when planted in Clumps with various Trees, they will grow to be ten or twelve Feet high; but it is very rare to ſee them larger.

RHAMNUS; The Buckthorn.

The *Characters* are;

It hath a Funnel-ſhap'd Flower, conſiſting of one Leaf, which is divided towards the Top into four or five Segments; out of the Flower-cup riſes the Pointal, which afterwards becomes a ſoft roundiſh Berry, very full of Juice, incloſing four hard Seeds, which are round and ſmooth on the Outſide, but flatted on the other.

The *Species* are;

1. Rhamnus; *Catharticus. C. B. P.* Common purging Buckthorn.

2. Rhamnus; *Catharticus, minor. C. B. P.* Leſſer purging Buckthorn.

3. Rhamnus; *ſpinis oblongis, cortice albo Monſpelienſum. J. B.* Buckthorn with long Spines and a white Bark of Montpelier.

4. Rhamnus; *Afer, folio pruni longiori, ſubrotundo, flore candicante, Spinis longiſſimis. Boerh. Ind. alt.* African Buckthorn with a longer roundiſh Plum Leaf, white Flowers, and very long Spines.

5. Rhamnus; *Hiſpanicus, folio Buxi, minor. Tourn.* Leſſer Spaniſh Buckthorn with a Box Leaf.

6. Rhamnus; *Afer, Spinis longis, cortice albo, fructu cæruleo. Boerh. Ind.* African Buckthorn with long Spines, a white Bark, and blue Fruit.

The firſt of theſe Trees is very common in the Hedges, in divers Parts of *England*; the Berries of which are order'd by the *College of Phyſicians* for Medicinal Uſe; but particularly for making a Syrup, which was formerly in great Uſe, but of late the Perſons who ſupply the Markets with theſe Berries have gathered ſeveral other Sorts of Berries, which they have either mixed with thoſe of the *Buckthorn*, or have wholly ſubſtituted them in their Place; theſe are the Berries of the *Frangula*, *Cornus Fœmina*, *&c.* which Mixture hath ſpoil'd the Syrup, and render'd it leſs eſteem'd. But whoever purchaſes the *Buckthorn* Berries, may diſtinguiſh whether they are right or not, by opening them, and obſerving the Number of Seeds in each, for theſe have commonly four, whereas the *Frangula* has but two, and the *Cornus Fœmina* but one.

The ſecond Sort is leſs common in *England*, and only to be found in Gardens where it is cultivated for Variety. Both theſe Sorts may be propagated by laying down their tender Branches in *Autumn*, which, if duly water'd in dry Weather, the ſucceeding Summer will take Root in the Compaſs of one Year, and may then be tranſplanted either where they are to remain, or in ſome Nurſery, to be trained up for a few Years, and then removed to their Places of Growth.

The firſt Sort will grow to the Height of eighteen or twenty Feet, but being a ſtraggling Grower, is ſeldom much cultivated in Gardens.

The ſecond Sort ſeldom riſes above eight Feet high, and ſo ſhould be planted amongſt Shrubs of the ſame Growth, where it will add to the Variety, tho' it has little more Beauty than the former.

They may alſo be propagated by Seeds, which muſt be ſown on a Bed of freſh Earth, ſoon after they are ripe; the Spring following the Plants will appear, when they muſt be carefully clean'd from Weeds; the Autumn following they may be tranſplanted out, and managed as the Layers.

The third Sort is commonly preſerved in Green-houſes, in *England*, but is hardy enough to bear the Cold of our ordinary Winters in the open Air, if planted in a dry Soil, and defended from cold Winds.

This Plant may be propagated by laying down the tender Branches in the Spring, which if watered in dry Weather, will take Root before the *Michaelmas* following, at which Time they may be taken off and tranſplanted into Pots, fill'd with light freſh Earth, and in Winter placed in the Green-houſe. But if the young Plants are deſigned for the full Ground, they ſhould continue upon the old ones until Spring, at which Time they may be taken off, and tranſplanted where they are to remain.

It may alſo be propagated by planting Cuttings in *May* or *June*, upon a Bed of light freſh Earth, obſerving to water and ſhade 'em until they have taken Root; and during the Summer Seaſon they muſt be kept clear from Weeds, and at *Michaelmas* they may be planted into Pots, as the Layers, or elſe permitted to remain until Spring, when they may be removed, as was directed before. There is no great Beauty in this Plant, but it is preſerved in ſeveral Gardens for the Sake of Variety.

The fourth, fifth, and ſixth Sorts are alſo preſerved in ſeveral curious Gardens for Variety, but the ſixth is the moſt beautiful of 'em all; this produces vaſt Quantities of purple Flowers, moſt part of Summer, and many times ripens its Seeds in *England*: Theſe may all be propagated as the laſt Sort, and require to be houſed in Winter, tho' they need only be ſhelter'd from the extream Froſt, but ſhould have as much free Air as poſſible in mild Weather, and in Summer muſt be often watered. Theſe delight in a freſh light Soil, and require to be often removed, becauſe their Roots do greatly increaſe, ſo as to fill the Pots in a ſhort Time.

RHUS; The Sumach Tree.

The *Characters* are;

The Flower conſiſts of five Leaves, which are placed in a circular Order, and expand in Form of a Roſe; from whoſe Flower-cup riſes the Pointal, which afterwards becomes a roundiſh or almoſt Kidney-ſhap'd Veſſel, containing one Seed of the ſame Shape: To which Marks may be added, the Flowers growing in Bunches, and the Leaves are either winged or have three Lobes.

The *Species* are;

1. Rhus; *Virginianum. C. B. P.* Virginian Sumach, *by ſome falſely called,* The Stag's-horn-tree.

2. Rhus; *tenuifolia Virginiana humilis: Rhus, anguſtifolium. C. B. P. Pluk. Alm.* Dwarf Virginian Sumach with narrow Leaves.

3. Rhus; *Africanum, trifoliatum, majus foliis ſubtus argenteis, acutis & margine inciſis. Pluk. Phyt.* Great African three-leav'd Sumach, with narrow Leaves cut on their Edges, and white underneath.

4. Rhus; *Africanum, trifoliatum, minus, glabrum, ſplendente folio ſubrotundo, integro, forte Lentiſcus Africanus triphyllos quorundam. Pluk. Phyt.* Leſſer three-leav'd African Sumach, with a whole, roundiſh, ſhining, ſmooth Leaf.

5. Rhus; *Africanum, trifoliatum majus, folio ſubrotundo integro, molli & incano. Pluk. Phyt.* Greater three-leav'd African Sumach, with a whole, roundiſh, woolly Leaf.

The firſt of theſe Plants is pretty common in many Gardens near *London,* where it endures the ſevereſt Cold of the Winters in the open Air, and is uſually intermix'd in ſmall Wilderneſs Quarters, amongſt other Trees of the like Growth, where it affords an agreeable Variety: This produces Tufts of ſmall Flowers in *June,* at the Extremities of the Branches, which are ſucceeded by Seeds which are inclos'd in red Covers, ſo that the whole Spikes appear of a fine red Colour. Theſe Tufts are ſometimes uſed in Dying, and the Branches of the Tree are uſed for Tanning of Leather, in *America,* where theſe Trees grow in Plenty.

This Tree will grow to be eight or ten Feet high, but is very ſubject to produce crooked, unſightly Branches, ſo that it can't be reduc'd to a regular Stem, which renders it unfit to plant ſingly in an open Situation; but amongſt other Trees, where the Deformity of the Stem is hid, it looks very well.

The ſecond Sort is leſs common than the firſt, and only to be found in ſome very curious Gardens. This is like the firſt, in moſt reſpects, but is of much ſmaller Growth, and the Leaves are very narrow. Both theſe may be propagated in Plenty, from the great Quantity of Suckers which they produce from their Roots, which being taken off in *March,* and planted on a light ſandy Soil, will, in a few Years, produce Flowers. They may alſo be propagated by laying down of the Branches, in the Spring of the Year, which will take Root in the Compaſs of one Seaſon, and may then be taken off and tranſplanted where they are to remain.

The *African* Sorts are all preſerv'd in Pots or Tubs, and houſed in Winter; being too tender to endure the Cold of this Climate in the open Air. Theſe may be propagated by laying down their young Branches into freſh Earth, obſerving to water them duly in dry Weather, which will greatly forward their Rooting: In one Year they will be fit to tranſplant, when they may be taken from the old Plants, and each placed in a ſeparate Pot, fill'd with freſh light Earth. The beſt Time for tranſplanting of theſe Plants is in *April*, obſerving to water and ſhade them until they have taken Root, after which they may be expoſed with *Myrtles*, *Oleanders*, and other hardy Exoticks, during the Summer Seaſon, and in Winter muſt be houſed with them, being equally as hardy, and only require to be ſcreened from ſevere Froſt.

Theſe Plants do rarely produce Flowers in *England*, but as they retain their Leaves all the Winter, and may eaſily be reduced to a regular Head, ſo they are preſerved for the Diverſity of their Leaves, which adds to the Variety of a Green-houſe.

RIBES: The Currant-Tree.

The *Characters* are;

It hath no Prickles; the Leaves are large; the Flower conſiſts of five Leaves, which are placed in a circular Order, and do expand in Form of a Roſe; the Ovary, which ariſes from the Centre of the Flower-cup, becomes a globular Fruit, which are produced in Bunches.

The *Species* are;

1. Ribes; *vulgaris, acidus, ruber. J. B.* Common red Currant.

2. Ribes; *major, fructu rubro. H. Eyſt.* The large Dutch red Currant.

3. Ribes; *vulgaris, acidus, albas, baccas ferens. J. B.* Common white Currant.

4. Ribes; *quæ Groſſularia, hortenſis, majore fructu albo. H. R. Par.* Large Dutch white Currant.

5. Ribes; *major fructu carneo.* The Champaign Currant, *vulgò.*

6. Ribes; *Alpinus dulcis. J. B.* The Gooſeberry-leav'd Currant.

7. Ribes; *fructu parvo. Merr. Pin.* The ſmall wild Currant.

8. Ribes; *nigrum vulgò dictum, folio olente. J. B.* The Black Currant.

9. Ribes; *vulgaris, foliis ex luteo variegatis.* The Yellow ſtrip'd-leav'd Currant.

10. Ribes; *vulgaris, foliis ex albo eleganter variegatis.* The common Currant, with Leaves beautifully variegated with Green and White.

11. Ribes; *fructu albo, foliis ex albo variegatis.* The white Currant, with ſtrip'd Leaves.

12. Ribes; *Alpinus dulcis, foliis variegatis.* The ſtrip'd Gooſeberry-leav'd Currant.

13. Ribes; *fructu nigro, foliis variegatis.* The black Currant with ſtrip'd Leaves.

14. Ribes; *Americana, fructu nigro.* The American black Currant.

The five firſt mention'd Sorts are preſerv'd in all curious Gardens for the Sake of their Fruits: Indeed of late Years, the common red and white Currants have been neglected, ſince the *Dutch* red and white have become plenty in *England*; theſe producing much larger and fairer Fruit to the Sight than the common Sorts, though I think the common Sorts are much better flavour'd; ſo that they ſhould not be entirely neglected by ſuch as are curious in Fruits.

The ſixth Sort is preſerved as a Curioſity, by ſuch who delight in Variety, but the Fruit is not valuable.

The ſeventh Sort is found wild in *England.* The Fruit of this Kind is ſmall, and very tart, which renders it unworthy of being cultivated in Gardens.

The eighth Sort is preſerved in ſome old Gardens, but the Fruit having a diſagreeable, ſtrong Taſte, has occaſioned its being but little cultivated of late Years.

Thoſe Sorts with variegated Leaves are preſerved by ſuch as are fond of ſtrip'd Plants; but as their greateſt Beauty is only in the Spring, before their Leaves grow large, after which they become more green; ſo they are ſcarcely worth preſerving in a Garden.

The fourteenth Sort was obtain'd by Mr. *Peter Collinſon* from *America*, in whoſe fine Garden it has produced Fruit, and from thence has been communicated to ſeveral other curious Gardens. The manner of this Plant's flowering is very different from the other Sorts of Currants, for which Variety it may have a Place among other Shrubs; but the Fruit being ſomewhat like our Black *Currant*, is not much eſteem'd.

All theſe Sorts may be eaſily propagated by planting their Cuttings any time from *September* to *March*, upon a Spot of freſh Earth, which in the Spring muſt be kept very clear from Weeds, and in very dry Weather if they are water'd, it will greatly promote their Growth; Theſe may remain two Years in this Nurſery, during which time they muſt be pruned up for the Purpoſes deſign'd, *i. e.* either to clear Stems, if for Standards, or if for Walls, Pales, or Eſpaliers, they may be trained up flat.

Then they ſhould be planted out where they are to remain; the beſt Seaſon for which is ſoon after the Leaves begin to decay, that they may take Root before Winter, ſo that they may be in no Danger of ſuffering from Drought in the Spring.

Theſe Plants are generally planted in Rows, at about ten Feet aſunder; and four Diſtance in the Rows; but the beſt Method is to train them againſt low Eſpaliers, in which manner they will take up much leſs Room in a Garden, and their Fruit will be much fairer.

The Diſtance they ſhould be placed for an Eſpalier, ought not to be leſs than eight Feet, that their Branches may be trained horizontally, which is of great Importance to their Bearing.

Thoſe that are planted againſt Pales or Walls, ſhould alſo be allowed the ſame Diſtance; if they are planted againſt a South-Eaſt Wall or Pale, it will cauſe their Fruit to ripen at leaſt a Fortnight or three Weeks ſooner than thoſe in the open Air, and thoſe which are planted againſt a North Wall or Pale, will be proportionably later; ſo that by this Method the Fruit may be continued a long Time in Perfection, eſpecially if thoſe againſt the North Pales are matted in the Heat of the Day.

Theſe Plants produce their Fruit upon the former Year's Wood, and alſo upon ſmall Snags which come out of the old Wood, ſo that in pruning 'em, theſe Snags ſhould be preſerved, and the young Shoots ſhortened in proportion to their Strength. The only Method, very neceſſary to be obſerved in pruning of them, is not to lay the Shoots too cloſe, and never to prune their Snags to make 'em ſmooth; this, with a ſmall Care in obſerving the Manner of their Growth, will be ſufficient to inſtruct any Perſon how to manage this Plant, ſo as to produce great Quantities of Fruit.

Theſe Plants will thrive and produce Fruit in almoſt any Soil or Situation, and are often planted under the Shade of Trees; but the Fruit is always beſt when they are planted to the open Air, and upon a dry Soil.

RICINOIDES; Phyſick-nut, *vulgò.*

The *Characters* are;

The Male Flowers conſiſt of ſeveral Leaves, which are placed in a circular Order, and do expand in Form of a Roſe; theſe are barren: At remote Diſtances from theſe Flowers, upon the ſame Plant, are produc'd the Embryo's, which are wrapt up in the Flower-cup, and afterwards do become tricapſular Fruits, containing one oblong Seed in each Cell.

The *Species* are;

1. Ricinoides; *Americana, Goſſypii folio. Tourn.* American Phyſick-nut, with a Cotton Leaf.

2. Ricinoides; *arbor, Americana, folio multifido. Tourn.* Tree American Phyſick-nut, with a multifid Leaf, *commonly called in the Weſt-Indies,* French Phyſick-nut.

3. Ricinoides; *Americana, ſtaphiſagria folio. Tourn.* American Phyſick-nut with a Staves-acre Leaf, *called in the Weſt-Indies,* Belly-ach-weed and Wild Caſada.

4. Ricinoides; *Americana, Ælegni folio. Plum.* American Phyſick-nut, with a wild Olive Leaf.

Theſe Plants are very common in the warm Parts of *America.* The firſt Sort is planted in Hedges, in moſt Parts of *Jamaica* and *Barbados,* and is propagated by Slips or Cuttings, which will take Root very freely, and do make a good Fence in a ſhort Time, being very quick of Growth. This riſes to be twenty Feet high, and produces a great Quantity of *Nuts,* which are given from three to ſeven, for a Vomit; but if the thin Film be taken off, they may be eaten in Quantities without any ill Effect. There is an Oil drawn from theſe Seeds, which is uſed for burning in Lamps.

The ſecond Sort is cultivated in Gardens in *Jamaica* and *Barbados,* for the Beauty of its Flowers, which are of a fine ſcarlet Colour, and produced in large Bunches on divers Parts of the Plant. The *Nuts* of this Kind are larger than the other, but have much the ſame Quality. This is not a Native in any of the *Engliſh* Settlements in the *Weſt-Indies,* but was brought thither either from the *Spaniſh* or *French* Settlements, from whence it had the Names of *French* and *Spaniſh Phyſick-Nut.*

The third Sort is very common in the *Savannas* in *Jamaica* and *Barbados*; the Seed of this Kind is the common Phyſick among the poorer Sort, for the dry Belly-ach.

The fourth Sort grows plentifully upon the Sea-Coaſt in divers Parts of the *Weſt-Indies,* and is ſometimes brought into *England* as a Curioſity; where, in ſome very good Gardens, it is preſerved with the former Sorts.

Theſe may be all propagated by ſowing their Seeds upon a Hot-bed in the Spring, and when the Plants are come up, they ſhould be each tranſplanted into a ſeparate Pot, fill'd with light freſh Earth, and plunged into a Hot-bed of Tanners-Bark, obſerving to ſhade 'em until they have taken Root, after which they ſhould have Air and Water in Proportion to the Warmth of the Seaſon, and the Hot-bed in which they are placed.

When their Roots have filled theſe Pots, they ſhould be ſhaken out, and put into larger Pots, filled with the ſame freſh Earth, and plunged again into the Hot-bed; and ſo, from time to time, as the

Plants advance, they ſhould be ſhifted into larger Pots, and when they are too high to be contained under a Frame, they ſhould be removed into the Bark-Stove, where they may have Room to advance in Height, obſerving to water them duly, as they may require it; which if conſtantly performed, and the Plants kept in a warm Bed, they will grow three or four Feet high the firſt Summer, and divide into ſeveral Branches in Winter.

Theſe Plants muſt be placed in a Bark-Stove, (with other Plants which are the Produce of the ſame Countries) during which Seaſon they ſhould be often refreſh'd with Water, and the Stove ſhould be kept up to *Anana*'s Heat, (as mark'd on Mr. *Fowler*'s Thermometers); in this they will continue flouriſhing all the Winter, and early the next Spring will produce Flowers, which will be ſucceeded by Fruit.

Theſe Plants, if thus managed, will continue ſeveral Years, and annually produce a great Number of Flowers and Fruit, ſo that they are worthy of a Place in every curious Collection of Exotick Plants.

RICINUS; Palma Chriſti, *vulgò*.

The *Characters* are;

*The Flowers are apetalous, (*i. e. *have no Leaves) conſiſting of many Stamina, which ariſe in the Center of the Flower-cup; theſe are barren; for the Embryo's are produced at remote Diſtances, upon the ſame Plant, which afterwards become triangular Fruits, having three Cells, in each of which is contained one oblong Seed, which has a hard Shell.*

The *Species* are;

1. Ricinus; *vulgaris. C. B. P.* The common Palma Chriſti, commonly known in the *Weſt-Indies* by the Name of Oil-Nut, *or* Agnus Caſtus.

2. Ricinus; *vulgaris, minor. C. B. P. caule rutulante.* The leſſer Palma Chriſti with reddiſh Stalks, *commonly called,* in *Barbados,* Red Oil Seed.

3. Ricinus; *vulgaris, minor. C. B. P. caule vireſcente.* Leſſer Palma Chriſti with green Stalks, *commonly called* White Oil Seeds in *Barbados.*

4. Ricinus; *Americanus, major, caule vireſcente. H. R. P.* The greater Palma Chriſti with green Stalks.

5. Ricinus; *Africanus, maximus, caule geniculato rutilante. H. R. Par.* The greateſt African Palma Chriſti with reddiſh jointed Stalks.

Theſe Plants are very common in divers Parts of *Africa* and *America,* and ſome of them are alſo found in the warm Parts of *Europe*; but in *England* they are preſerved with great Care in ſeveral curious Gardens.

The firſt Sort has been a long Time in this Country, but was formerly treated as an annual Plant, whereas if it be preſerved in a good Green-houſe, it will abide two or three Years, and become a large Plant.

The ſecond and third Sorts do grow promiſcuouſly all over *America*, where their Seeds are gathered to draw an Oil from them, for the uſe of Lamps; theſe Seeds are frequently ſent into *England*, intermixed with each other.

The fourth Sort is alſo very common in *America*, growing promiſcuouſly with the common Sort; the Seeds of both being gather'd indifferently to draw an Oil from them.

e fifth Sort, tho' mention'd to
Native of *Africa*, yet is alſo
common in divers Parts of
ica, from whence I have ſe-
times receiv'd the Seeds.
produces very large Leaves
Seeds, and will grow to a
Size if planted in a rich Soil.
e meaſur'd one of the Leaves
is Plant (which was growing
Chelſea) which was upwards
vo Feet Diameter, and the
was as large as a middle-ſiz'd
n-ſtaff, tho' but of one Sum-
Growth.

eſe Plants may be propagated
wing their Seeds upon a Hot-
and when they are come up,
ſhould be each planted into
rate Pot fill'd with light freſh
, and plung'd into a freſh Hot-
bſerving to water and ſhade
until they have taken Root;
which they muſt have a great
of free Air, when the Seaſon
d, otherwiſe they will draw
l, and be very weak: And
eſe Plants grow very faſt, ſo
Roots will in a ſhort Time
Pots, therefore they ſhould
fted into larger Pots fill'd with
ke freſh Earth; and toward
atter End of *May*, when the
is warm, they may be
'd to endure the open Air
rees; and then, if they are
d out into a very rich Bor-
nd in dry Weather duly wa-
they will grow to a very large
particularly the firſt Sort,
I have ſeen upwards of ten
igh in one Seaſon; and theſe
have produc'd a great Quan-
Flowers and Seeds: But if
tend to preſerve them through
inter, they muſt never be
in the full Ground, becauſe
heir Roots have been widely
ed, there will be no tranſplanting them with Safety; therefore the beſt Way is to ſhift them into larger Pots from time to time as their Roots ſhall require, placing them in the open Air, during the Summer Seaſon, in ſome warm Situation, where they may remain until *October*, when they muſt be remov'd into the Houſe with other Exotick Plants, obſerving duly to water them in Winter, and let them have free Air in mild Weather, for they only require to be protected from Froſt and cold Winds, ſo that they will endure the Winter in a common Green-houſe without any Addition of artificial Warmth.

The four firſt Sorts will perfect their Seeds the firſt Seaſon in this Climate, provided they are ſown early in the Spring, but the fifth Sort will rarely produce any till the ſecond Year; ſo that there is a Neceſſity of preſerving this through the Winter, otherwiſe it cannot be maintain'd in *England*.

Theſe Plants do deſerve a Place in every curious Garden for the ſingular Beauty of their Leaves, (notwithſtanding their Flowers are not very valuable) eſpecially thoſe Sorts which may be propagated every Year from Seeds, becauſe thoſe Perſons who have no Green-houſe to place them into in Winter, may cultivate them as other annual Plants; amongſt which theſe being plac'd either in Pots or Borders, do afford an agreeable Variety: But it muſt be obſerv'd, as theſe are large growing Plants, never to place them too near other Plants of leſs Growth, becauſe theſe will over-bear and deſtroy them; and thoſe which are planted in Pots ſhould be allow'd room for their Roots to expand, and muſt be frequently water'd, otherwiſe they will not grow very large.

RIPENING of FRUIT.

The Method of producing Early Fruits.

A Wall ſhould be erected ten Feet high, and in Length according to the Number of Trees intended for three Years Forcing.

This being done, a Border may be mark'd out about four Feet wide on the South-ſide of it, and ſome Scantlings of Wood about four Inches thick, muſt be faſten'd to the Ground in a ſtrait Line on the Outſide of the Border to reſt the Glaſs Lights upon; which Lights are to ſlope backwards to the Wall, to ſhelter the Fruit as there ſhall be Occaſion.

Bars about four Inches wide, cut out of whole Deal, muſt be plac'd between theſe Glaſſes, ſo that the Lights may reſt on them.

If you would not have the Glaſs-Lights ſlope ſo much as they will from this Fall from the Upright, then you may have a Line of whole Deals fix'd on the Top of the Wall to project their whole Breadth over the Trees, and made ſo that the Top of the Glaſs-Lights may fall in an Inch or two under them: There muſt alſo be a Door ſhap'd to the Profile of the Frame at each End, that it may be open'd at either of the Ends, according as the Wind blows.

The Frame before-mention'd ſhould be made ſo, that when the firſt Part has been forc'd, the Frame may be mov'd the next Year forward, and the ſucceeding Year forward again; ſo that the Trees will be forc'd but every third Year; and having two Years to recover themſelves, will continue ſtrong for many Years.

Theſe Trees ſhould be well grown before they are forc'd, otherwiſe they will ſoon be deſtroy'd, and the Fruit produc'd on grown Trees will be much fairer and better taſted than on freſh-planted Trees.

The Fruit that may be planted in theſe Frames are,

The *Avant*, the *Albemarle*, the *Ann*, the *Early Newington* and *Brown Nutmeg Peaches*.

Mr. *Fairchild*'s *Early*, the *Elruge* and *Newington Nectarines*; the *Maſculine Apricock*; the *May Duke* and *May Cherry*.

As for *Grapes*; the *White* and *Black Sweet-water*.

Gooſeberries; the *Dutch White*, the *Dutch Early Green*, and the *Walnut-Gooſeberries*.

Currants; the *large Dutch White*, the *large Dutch Red Currants*.

It has been found by Experience, that the Trees will be injur'd, if the Heat be apply'd before *November*: And that the Time for applying the Heat for bringing either *Duke* or *May Cherries*, is about the Middle or latter End of that Month, and applying Heat at the ſame Time would do for *Apricocks*; ſo that the Maſculine *Apricock* will, in *February*, be as large as *Duke Cherries*, and will be *ripe* by the Begining of *April*.

Cherries thus forc'd will not hold ſo well as *Apricocks*, tho' the former will laſt, perhaps, for ſeven Years in good Plight; but *Apricocks* will thrive and proſper thus many Years.

It is very likely that Mr. *Fairchild*'s *Early Nectarines* would ripen much about the ſame Time as the *Maſculine Apricock*, if they were both forc'd at the ſame Time; and the *Brugnon Nectarine* would follow that. As to the forward Sorts of *Plums*, they have been try'd, and do *ripen* about the latter End of *April*.

Gooſeberries would produce green Fruit fit for Tarts in *January* and *February*, and probably would *ripen* about the End of *March* or the Beginning of *April* at the fartheſt.

Curants, which tend to ſhoot forward, might, by the ſame Heat that brings *Cherries* in *February*, be forc'd to produce *ripe* Fruit in *April*, if not ſooner.

As for the Diſtance of theſe Trees one from another, it need not be ſo great as is directed for thoſe planted in the open Air, becauſe they will never ſhoot ſo vigorouſly, therefore eight or nine Feet will be ſufficient.

The higher Parts of the Wall being furniſh'd with *Apricocks*, *Cherries*, *Nectarines*, *Peaches* and *Plums*, the lower ſmall Space between them may be fill'd up with *Currants*, *Gooſeberries* and *Roſes*.

As to the Pruning of the Trees:

The Time of doing it in theſe Frames, muſt not be the ſame as in other Trees; becauſe in the common Caſe of *Stone-Fruit* againſt Walls, the Spring does not begin till the End of *January*; but in the forcing Frames, the Spring begins in *November*: Therefore they ſhould be prun'd three Weeks before the Heat is apply'd; for then the Air will be ſo artificially temper'd, as to ſet the Trees a growing, and the Froſts cannot come at them, if the Glaſſes be ſet up as ſoon as they are prun'd.

As to the nailing of theſe Trees:

Every Branch that ſhoots muſt be laid as cloſe to the Wall as can be; for the Fruit which touches the Wall will be *ripe* a Month ſooner than thoſe that lie but two Inches from it.

Sometimes it happens that the Tops of ſuch Trees have Bloſſoms a Month or ſix Weeks before the Bottom; and ſometimes one Branch has been full of Bloſſoms, when there have been half a Score or more Branches of the ſame Tree which have not ſtirr'd till the Fruit of the firſt Bloſſoms has been almoſt *ripe*, notwithſtanding which the Tree has done very well: And it is no uncommon Thing for ſuch Trees to have *Fruit ripening* upon them for near three Months continually.

As for *Gooſeberries*; ſuch Plants as are planted in theſe Frames, ſhould be ſuch as have ſpread; and when as many Shoots have been nail'd to the Wall as may conveniently be done, others may be left at a Diſtance from it, to ſucceed them in *ripening*.

If they are taken up in the Summer, and properly manag'd, they will bear Fruit the firſt Year, as well as if they had not been tranſplanted.

The *Currants* may be order'd after the ſame Manner, and alſo the *Roſes*: And the beſt kind of *Roſe* for this Purpoſe, is the *Monthly Roſe*, which ought always to be topped about the End of *July* or the Beginning of *Auguſt*, to make them put out a good Number of Flower-buds.

As to the laying the Dung to the Wall;

The Dung, before it be laid to the Back of the Wall, ſhould be thrown up in an Heap, and lie for ſome Days, that it may yield an equal Heat every where, and be conſtant.

When it has been thus prepar'd, it ſhould be laid about four Feet thick at the Baſe, and ſo ſloping, till it has but two Feet wide at the Top.

It ſhould be laid at firſt within four Inches of the Top of the

Wall, for it will ſink to about three Feet in ſix Weeks time; and then ſome freſh Dung muſt be laid, becauſe the firſt Heat will not do much more than ſwell the Buds of the Trees, or begin to bring them to a green Colour, or at the moſt will but barely ſhew the Colour of the Bloſſom-Buds.

But according as the Froſts ſhall have happen'd to have had more or leſs Influence over the Buds, this will happen ſooner or later.

If theſe Trees be cover'd with the Glaſſes, it will contribute very much to forward their Bloſſoming; for tho' their Bloſſoms will not be deſtroy'd by the Froſts, yet the more the Froſts come at them, they will both be the drier, and more hard to open.

If the Weather be tolerably mild, the Trees ought not to be hinder'd from the Benefit of the Showers till the Buds begin to ſtir; but afterwards the Glaſſes ſhould be kept conſtantly over them till the Influence of the Sun is ſomething conſiderable.

But the Doors which are at each End of the Frame, ſhould, in the mean time, be ſet open, when the Wind does not blow too ſharp, and the Sun ſhines any thing warm: And if this does not happen in the Space of a Fortnight, then the Doors at both Ends may be open'd, and Mats of Baſs or Canvaſs ſhould be hung up over the Door-ways to correct the Winds, and give the Air leave to circulate in the Frames.

As for *Cherries*; about three Changes of Dung will be ſufficient to bring them to a due Ripeneſs in *February*, ſuppoſing each Parcel remains a Month at the Back of the Wall.

But as for *Apricocks*, *Grapes*, *Nectarines*, *Peaches* and *Plums*, if *April* proves cold, the forcing Heat muſt be continu'd till *May* is ſettled; but ſome of the Glaſſes ſhould be open'd in the Morning, in *March* and *April*, when the Wind is ſtill, and the Sun warm; and they ſhould be permitted to receive the Showers that fall, while the Fruit is growing; but while they are in Bloſſom no Rain ſhould come near them, becauſe if there ſhould be any Moiſture lodg'd in the Boſom of the Flowers, and the Sun ſhould ſhine hot thro' the Glaſſes, it would be apt to deſtroy them.

The Dung that comes from theſe Frames having loſt its Heat, may be laid in Heaps to rot for the meliorating of ſtubborn Grounds.

Another thing which ought to be obſerv'd in planting *Fruit* in theſe Frames, is to plant thoſe *Fruits* which come forward together, and thoſe which come late by themſelves, becauſe it will be prejudicial to the forward *Fruit* to give them any more Heat when they have done bearing; when at the ſame time the later Fruits ſet amongſt them may require more Heat, and to be continued longer; ſome of them, perhaps, requiring an artificial Heat till *May*.

There may alſo a Row or two of *Scarlet Strawberries* be planted near to the Back of this Frame; and theſe you may expect will be *ripe* by the End of *February* or Beginning of *March*.

As for the *Vines*, they may probably be brought to bloſſom, and have ripe *Grapes* in *May*.

There may alſo be here and there planted a *Monthly Roſe-tree*, and *Hyacinths*, *Jonquils*, *Narciſſus's*, *Polyanthus's*, and alſo early *Tulips* might be planted in the Borders.

ROSA; The Roſe-Tree.

The *Characters* are;

The Flower is compoſ'd of ſeveral Leaves, which are plac'd circularly, and do expand in a beautiful Order; whoſe leafy Flower-cup afterwards becomes a roundiſh or oblong fleſhy Fruit, incloſing ſeveral angular hairy Seeds: To which may be added, It is a weak, pithy Shrub, for the moſt part beſet with Prickles, and hath pinnated Leaves.

The *Species* are;

1. Rosa; *ſylveſtris, inodora, ſeu canina. Park. Theat.* The Wild Briar, Dog *Roſe*, *or* Hep Tree.

2. Rosa; *ſylveſtris, fructu majore, hiſpido. Raii Syn.* Wild Briar *or* Dog *Roſe*, with large prickly Heps.

3. Rosa; *ſylveſtris, pomifera major, noſtras. Raii Syn.* The greater Engliſh Apple-bearing *Roſe*.

4. Rosa; *pumilla, ſpinoſiſſima, foliis pimpinella glabris, flore albo. J. B.* The Dwarf Wild Burnet-leav'd *Roſe*.

5. Rosa; *pumilla, ſpinoſiſſima, foliis pimpinella glabris, ex luteo & viridi eleganter variegatis.* The Dwarf Wild Burnet-leav'd *Roſe*, with variegated Leaves.

6. Rosa; *pimpinella minor, Scotica, floribus ex albo & carneo eleganter variegatis. Pluk. Alm.* The ſtrip'd Scotch *Roſe*.

7. Rosa; *ſylveſtris, foliis odoratis. C. B. P.* The Sweet-Briar *or* Eglantine.

8. Rosa; *ſylveſtris odora, ſive Eglanteria, flore duplici. Park. Parad.* Sweet-Briar, with a double Flower.

9. Rosa; *rubra, multiplex. C. B. P.* The double Red *Roſe*.

10. Rosa; *Damaſcena. Park. Parad.* The Damask *Roſe*.

11. Rosa; *Provincialis, ſive Hollandica, Damaſcena. Park. Parad.* The Damask Provence *Roſe*.

12. Rosa; *Provincialis, major, flore pleno, ruberrimo. Boerh. Ind. Atl.* The Red Provence *Roſe*.

13. Rosa; *centifolia, Batavica. Cluſ. H.* The Dutch Hundred-leav'd *Roſe*.

14. Rosa; *Provincialis ſpinoſiſſima, pedunculo muſcoſo.* The Moſs Provence *Roſe*.

15. Rosa; *Provincialis rubra. Park. Parad.* The Common Provence *Roſe*.

16. Rosa; *holoſericea, ſimplex. Park. Parad.* The ſingle Velvet *Roſe*.

17. Rosa; *holoſericea, multiplex. Park. Parad.* The double Velvet *Roſe*.

18. Rosa; *odore Cinnamomi, flore pleno. C. B. P.* The double Cinnamon *Roſe*.

19. Rosa; *odore Cinnamomi, ſimplex. C. B. P.* The ſingle Cinnamon *Roſe*.

20. Rosa; *lutea, ſimplex. C. B. P.* The ſingle Yellow *Roſe*.

21. Rosa; *lutea, multiplex. C. B. P.* The double Yellow *Roſe*.

22. Rosa; *ſylveſtris, Auſtriaca, flore Phœnicio. Park. Theat.* The Auſtrian *Roſe*.

23. Rosa; *ſylveſtris, Auſtriaca, flore totum luteum.* The Yellow Auſtrian *Roſe*.

24. Rosa; *uno ramo luteos, cæteris puniceos, flores gerens ſimplices. Boerh. Ind. Alt.* The Auſtrian *Roſe*, with yellow Flowers upon one Branch, and purple Flowers on the other.

25. Rosa; *alba, vulgaris major. C. B. P.* The common White *Roſe*.

26. Rosa; *alba, minor. C. B. P.* The leſſer White *Roſe*.

27. Rosa; *candida, ſemiplena. J. B.* The ſemi-double White *Roſe*.

28. Rosa; *incarnata. Park. Parad.* The Bluſh *Roſe.*

29. Rosa; *Praneſtina, variegata, plena. Hort. Eyſt.* The York and Lancaſter *Roſe.*

30. Rosa; *rubro & albo variegata, Roſa Mundi, vulgò dicta. Raii Hiſt.* The *Roſe* of the World, or *Roſa Mundi.*

31. Rosa; *Francofurtenſis. Park. Parad.* The Frankfort *Roſe.*

32. Rosa; *ſempervirens. Park. Parad.* The Ever-green *Roſe.*

33. Rosa; *omnium Calendarum. H. R. Par.* The Monthly *Roſe.*

34. Rosa; *omnium Calendarum, flore variegato.* The ſtrip'd Monthly *Roſe.*

35. Rosa; *ſine ſpinis, flore minore. C. B. P.* The *Roſe* without Thorns.

36. Rosa; *ſine ſpinis, flore majore ruberrimo.* The Royal Virgin *Roſe.*

37. Rosa; *ſylveſtris. Virginienſis. Raii Hiſt.* The Wild Virginian *Roſe.*

38. Rosa; *moſchata, ſimplici flore. C. B. P.* The ſingle Musk *Roſe.*

39. Rosa; *moſchata, flore pleno. C. B. P.* The double Musk *Roſe.*

40. Rosa; *moſchata ſempervirens. C. B. P.* The Ever-green Musk *Roſe.*

41. Rosa; *Belgica, ſive vitrea, flore rubro. Rea. Flor.* The Red Belgick *Roſe.*

42. Rosa; *Belgica, ſive vitrea, flore rubicante. Rea. Flor.* The Bluſh Belgick *Roſe.*

43. Rosa; *marmorea. Rea. Flor.* The marbled *Roſe.*

44. Rosa; *Provincialis, flore ſimplici.* The ſingle Provence *Roſe.*

45. Rosa; *Damaſcena, flore ſimplici.* The ſingle Damask *Roſe.*

46. Rosa; *pimpinella minor, Scotica, flore livide rubente.* The Dwarf Scotch *Roſe*, with a blueiſh red Flower.

The firſt Sort of *Roſe* grows wild in the Hedges in moſt Parts of *England:* The Fruit of this Tree is made into a Conſerve for Medicinal Uſe; but this is ſeldom cultivated in Gardens.

The ſecond, third and fourth Sorts do alſo grow wild in divers Parts of *England*, and are rarely preſerv'd in Gardens, unleſs for Variety Sake.

The fifth Sort is a Variety of the fourth, and is preſerv'd by ſome for the Beauty of its ſtrip'd Leaves.

The ſixth Sort is found wild in *Scotland*, and has been by many ſuppos'd to be the ſame as the fourth Sort, but only differing therefrom in having variegated Flowers; which is a great Miſtake, for I have obſerv'd, where the two Sorts were cultivated on the ſame Soil for many Years, and yet retain'd a conſiderable Difference in the Size of the Plants, the *Scotch* Sort being not half ſo large as the other, yet the Flowers were much larger, the Leaves were leſs, and the Branches much weaker than thoſe of the fourth Sort.

The laſt Sort here mention'd, was rais'd from the Seeds of the *Scotch Roſe*; and altho' the Flowers were plain colour'd, yet the whole Appearance of the Plant continues the ſame as the original Kind, which is a plain Proof of its being different from the fourth Sort.

The *Sweet-Briar*, although wild in ſome Parts of *England*, yet is preſerv'd in moſt curious Gardens for the extreme Sweetneſs of its Leaves, which perfumes the circumambient Air in the Spring of the Year, eſpecially after a Shower of Rain. The Flowers of this Sort being ſingle, are not valued, but the Branches of the Shrubs are cut to intermix with Flowers to place in Baſons to adorn Halls, Parlours, &c. in the Spring of the Year, the Scent of this Plant being agreeable to moſt Perſons.

The Double-flower'd *Sweet-Briar* is preſerv'd on the Account of its beautiful Flowers, as well as for the Sweetneſs of its green Leaves.

All the other Sorts of *Roſes* are originally of foreign Growth, but are hardy enough to endure the Cold of our Climate in the open Air, and produce the moſt beautiful and fragrant Flowers of any kind of Shrubs yet known: This, together with their long Continuance in Flower, has juſtly render'd them the moſt valuable of all the Sorts of flowering Shrubs; beſides the great Variety of different Sorts of *Roſes*, do make a Collection of Flowers, either for Baſons or in the Garden, without any other additional Mixture; and their Scent being the moſt inoffenſive Sweet, is generally eſteem'd by moſt Perſons.

But in order to continue theſe Beauties longer than they are naturally diſpos'd to laſt, it is proper to plant ſome of the monthly *Roſes* near a warm Wall, which will occaſion their Budding at leaſt three Weeks or a Month before thoſe in the open Air; and if you give them the Help of a Glaſs before them, it will bring their Flowers much forwarder, eſpecially where Dung is plac'd to the Backſide of the Wall (as is practis'd in raiſing Early Fruits:) By this Method I have ſeen fair *Roſes* of this Kind blown in *February*, and they may be brought much ſooner, where People are curious this Way.

You ſhould alſo cut off the Tops of ſuch Shoots which have been produc'd the ſame Spring, early in *May*, from ſome of theſe Sorts of *Roſes* which are planted in the open Air, and upon a ſtrong Soil: This will cauſe them to make new Shoots, which will flower late in Autumn; as will alſo the late removing the Plants in Spring, provided they do not ſuffer by Drought, as I have ſeveral times experienc'd; but particularly in the Year 1718, when I had occaſion to remove a large Parcel of theſe Plants in *May*, juſt as they were beginning to flower: In doing of which, I cut off all the Flower-buds, and after having open'd a Trench in the Place where they were to be planted, I poured a large Quantity of Water, ſo as to render the Ground like a Pap; then I took up the Plants, and plac'd them therein as ſoon as poſſible, that their Roots might not dry; and after planting them I water'd the Ground well again, and cover'd the Surface over with Mulch, to prevent its drying; after this I repeated watering the Plants all over two or three times a Week in the Evening, until they had taken Root: In about three Weeks time, the Plants ſhot out again, and produc'd a great Quantity of Flowers in *Auguſt* and *September*, which were as fair as thoſe produc'd in *June*. This is the only Sort of *Roſe* for this Purpoſe, there being no other Sort which will flower both early and late except this.

The next Sort of *Roſe* which flowers in the open Air, is the *Cinnamon*, which is immediately follow'd by the *Damask Roſe*; then the *Bluſh*, and *York*, and *Lancaſter* come; after which, the *Provence*, *Dutch Hundred-leav'd White*, and moſt other Sorts of *Roſes* do follow; and the lateſt Sorts are the two *Musk Roſes*, which, if planted in a ſhady Situation, do ſeldom flower until *September*; and if the Autumn proves mild, will continue often till the Middle of *October*.

The Plants of theſe two Sorts ſhould be placed againſt a Wall, Pale, or other Building, that their Branches may be ſupported; otherwiſe, they are ſo ſlender and weak as to trail upon the Ground; theſe Plants ſhould not be pruned until Spring, becauſe their Branches are ſomewhat tender, ſo that when they are cut in Winter they often die after the Knife. Theſe produce their Flowers at the Extremity of the ſame Year's Shoots, in large Bunches, ſo that their Branches muſt not be ſhortened in the Summer, leſt hereby the Flowers ſhould be cut off. Theſe Shrubs will grow to be eight or nine Feet high, and muſt not be check'd in their Growth, if you intend they ſhould flower well, ſo that they ſhould be placed where they may be allowed Room.

The loweſt Shrub of all the Sorts here-mention'd, is the *Scotch Roſe*, which rarely grows above two Feet high, ſo that this muſt be placed among other Shrubs of the ſame Growth. The *Red Roſe* and the *Roſa Mundi* do commonly grow from three to four Feet high, but ſeldom exceed that; but the *Damask*, *Provence*, and *Frankfort Roſes* grow to the Height of ſeven or eight Feet; ſo that in Planting of them, great Care ſhould be taken, to place their ſeveral Kinds, according to their various Growths, amongſt other Shrubs, that they may appear beautiful to the Eye.

The *Frankfort Roſe* is of little Value, except for a Stock, to bud the more tender Sorts of *Roſes* upon, for the Flowers do ſeldom open fair, and have no Scent; but it being a vigorous Shooter, renders it proper for Stocks to bud the *Yellow* and *Auſtrian Roſes*, which will render them ſtronger than upon their own Stocks; but the *Yellow Roſes* do ſeldom blow fair within eight or ten Miles of *London*, tho' in the Northern Parts of *Great-Britain*, they do flower extremely well. This Sort muſt have a Northern Expoſure, for if it is planted too warm, it will not flower.

All the Sorts of *Roſes* may be propagated either from Suckers, Layers, or by budding them upon Stocks of other Sorts of *Roſes*, which latter Method is only practis'd for ſome peculiar Sorts, which do not grow very vigorous upon their own Stocks, and ſend forth Suckers very ſparingly; or where a Perſon is willing to have more Sorts than one upon the ſame Plant; but then it muſt be obſerved, to bud ſuch Sorts upon the ſame Stock as are nearly equal in their manner of Growth; for if there be a Bud of a vigorous growing Sort, and ſome others of weak Growth, the ſtrong one will draw all the Nouriſhment from the weaker, and entirely ſtarve them.

The beſt Sort for Stocks is the *Frankfort Roſe*, which is a vigorous Grower, and produces ſtrong, clean Shoots, which will take the Buds much better than any other Sort of *Roſe*; but you muſt be very careful to keep the Stock after Budding intirely clear from Suckers or Shoots at the Bottom, for if they are permitted to remain on, they will, in a ſhort time, ſtarve the

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Rows (as hath been direct-
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Shrubs) or into the Places
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ead Wood cut out, and the
s clear'd off, which ſhould be done every Autumn; and if there are any very luxuriant Branches which draw the Nouriſhment from the other Parts of the Plant, they ſhould be taken out or ſhorten'd, to cauſe it to produce more Branches, if there be occaſion for them to ſupply a Vacancy; but you muſt avoid crouding them with Branches, which is as injurious to theſe Plants as to Fruit-Trees; for if the Branches have not an equal Benefit of the Sun and Air, they will not produce their Flowers ſo ſtrong, nor in ſo great Plenty as when they are more open and better expos'd to the Sun, ſo that the Air may circulate the more freely between them.

ROSA SINENSIS; *vide* Ketmia Sinenſis.

ROSE THE GUILDER; *vide* Opulus.

ROSE-TREE; *vide* Roſa.

ROSEMARY; *vide* Roſmarinus.

ROSMARINUS; Roſemary.

The *Characters* are;

It is a verticillate Plant, with a labiated Flower, conſiſting of one Leaf, whoſe Upper-lip or Creſt is cut into two Parts, and turns up backwards, with crooked Stamina (or Chives;) but the Under-lip (or Beard) is divided into three Parts, the middle Segment being hollow like a Spoon; out of the two or three-teethed Flower-cup riſes the Pointal, attended as it were by four Embryo's, which afterwards turn to ſo many Seeds, that are roundiſh, and are incloſ'd in the Flower-cup.

The *Species* are;

1. Rosmarinus; *hortenſis, latiore folio. Mor. Hiſt.* Broad-leav'd Garden *Roſemary*.

2. Rosmarinus; *hortenſis, anguſtiore folio. C. B. P.* Narrow-leav'd Garden *Roſemary*.

3. ROSMARINUS; *ſtriatus, ſive aureus. Park. Theat.* The Gold-ſtrip'd *Roſemary.*

4. ROSMARINUS; *hortenſis, anguſtiore folio, argenteus. H. R. Par.* The narrow-leav'd Silver-ſtrip'd *Roſemary.*

5. ROSMARINUS; *Almerienſis, flore majore, ſpicato purpuraſcente. Tourn. Roſemary* of Almeria, with a large ſpiked purpliſh Flower.

6. ROSMARINUS; *ſpontaneus, folio eleganter variegato. Boerh. Ind.* Broad-leav'd *Roſemary,* with an elegant ſtrip'd Leaf.

Theſe Plants grow plentifully in the Southern Parts of *France,* in *Spain* and *Italy,* where, upon dry rocky Soils near the Sea, they thrive prodigiouſly; but notwithſtanding they are produc'd in warm Countries, yet they are hardy enough to bear the Cold of our ordinary Winters very well in the open Air, provided they are planted upon a poor, dry, gravelly Soil; on which they will endure the Cold much better than upon a richer Soil, where the Plants will grow more vigorouſly in *Summer,* and ſo be more ſubject to Injury from Froſt, and they will not have ſo ſtrong an Aromatick Scent as thoſe upon a dry barren Soil.

Thoſe Sorts with ſtrip'd Leaves are ſomewhat tender, and ſhould either be planted near a warm Wall, or in Pots fill'd with light freſh Earth, and ſhelter'd in Winter under a Frame, otherwiſe they will be ſubject to die in froſty Weather.

All theſe Sorts may be propagated by planting Slips or Cuttings of them in the Spring of the Year, upon a Bed of a light freſh Earth; and when they are rooted, they may be tranſplanted into the Places where they are deſign'd to grow; but it will be proper to do this about the Beginning of *Auguſt,* that they may take new Root before the froſty Weather comes on; for if they are planted too late in Autumn, they ſeldom live through the Winter, eſpecially if the Weather proves very cold; ſo that if you do not tranſplant them early, it will be the better Method to let them remain unremoved until *March* following, when the Froſt is over, obſerving never to tranſplant them at a Seaſon when the dry Eaſt Winds blow, but rather defer the doing of it until the Seaſon is more favourable; for if they are planted when there are cold drying Winds, they are apt to dry up their Leaves, and kill 'em: But if there happens to be ſome warm Showers ſoon after they are removed, it will cauſe 'em to take Root immediately; ſo that they will require no farther Care, but to keep them clear from Weeds.

Altho' theſe Plants are tender when planted in a Garden, yet when they are by Accident rooted in a Wall (as I have ſeveral times ſeen 'em) they will endure the greateſt Cold of our Winters, though expos'd much to the cold Winds; which is occaſioned by the Plant's being more ſtunted and ſtrong, and their Roots being drier.

The Flowers of the narrow-leav'd Garden Sort are uſed in Medicine, as are alſo the Leaves and Seeds.

RUBIA; Madder.

The *Characters* are;

The Flower conſiſts of one ſingle Leaf, which is cut into four or five Segments, and expanded at the Top; the Flower-cup afterwards becomes a Fruit compoſed of two juicy Berries, cloſely joined together, containing Seed, for the moſt part hollowed *like a Navel; to which may be added, the Leaves being rough, and ſurrounding the Stalks in Whorles.*

The *Species* are;

1. Rubia; *Tinctorum ſativa. C. B. P.* Cultivated Dyers Madder.

2. Rubia; *ſylveſtris aſpera, quæ ſylveſtris Dioſcoridis. C. B. P.* Wild Madder.

3. Rubia; *ſylveſtris, Monſpeſſulana, major. J. B.* Great wild Madder of *Montpelier.*

The firſt of theſe Sorts was formerly cultivated in divers Parts of *England,* for the *Dyers* Uſe; but of late Years it has been wholly neglected, ſo that at preſent I believe there is ſcarce any of it cultivated, except in ſmall Quantities for Medicinal Uſe: How this Plant came to be ſo much neglected in *England* I can't imagine, ſince it will thrive as well here as in any Country in *Europe*; and the Conſumption of it in *England* is pretty large; for I have been informed, that we pay upwards of thirty thouſand Pounds annually for this Commodity, which might be eaſily ſav'd to the Nation, were it cultivated here. At preſent the greateſt Quantity of it is cultivated in *Flanders* and *Holland,* from whence we are annually furniſh'd with it, in three different Manners, and diſtinguiſh'd by the Names of *Madder in the Branch, Madder in the Bundle,* and *Madder unbundled:* The firſt Sort is brought to us in the Root, as it comes out of the Ground, without any other Preparation than that of being dried. The ſecond Sort is that of *Bunch Madder,* or ſuch as is made into Bundles, which is *Madder in Branch,* firſt freed from the Bark and the Pith, then ground by a Mill into groſs Powder, as we buy it. The third Sort is the *Madder unbundled,* that is, the *Branched Madder,* ground into Powder; but the *bunched Madder,* or that in Bundles is the beſt, which for its Excellency, when it is freſh, is made into Bales, or put up into Casks; 'tis of a pale Red, but as it grows older, increaſes its Colour to a fine Red; that of *Zealand* is eſteem'd the beſt for the *Dyers* Uſe.

In the Year 1727, I obſerved a great Quantity of this Plant cultivated in *Holland,* between *Helvoetſluyce* and the *Brill,* and it being the firſt Time I had ever ſeen any conſiderable Parcel of it, I was tempted to make ſome Enquiries about its Culture, and take ſome Minutes of it down upon the Spot, which I ſhall here inſert, for the Uſe of ſuch as may have Curioſity to attempt the Culture of it.

In *Autumn* they plough the Land, where they intend to plant *Madder* in the Spring, and lay it in high Ridges, that the Froſt may mellow it; in *March* they plough it again, and at this Seaſon they work it very deep, laying it up in Ridges eighteen Inches aſunder, and about a Foot deep; then about the Beginning of *April,* when the *Madder* will begin to ſhoot out of the Ground, they open the Earth about their old Roots, and take off all the Side-ſhoots which extend themſelves horizontally, juſt under the Surface of the Ground, preſerving as much Root to them as poſſible: Theſe they tranſplant immediately upon the Tops of the new Ridges, at about a Foot apart, obſerving always to do this when there are ſome Showers, becauſe then the Plants will take Root in a few Days, and will require no Water.

When the Plants are growing, they carefully keep the Ground hoed, to prevent the Weeds from coming up between them, for if they are ſmothered by Weeds, eſpecially when young, it will either deſtroy or weaken them ſo much, that they ſeldom do well after. In theſe Ridges they let the Plants remain two Seaſons, during which Time they keep the Ground very clean, and at *Michaelmas*, when the Tops of the Plants are decay'd, they take up the Roots, and dry them for Sale. This is what I could learn of their Method of cultivating this Plant, to which I will ſubjoin a few Obſervations of my own, which I have ſince made upon the Culture of *Madder* in *England*. And, firſt, I find there is no Neceſſity for laying the Ground up in Ridges in *England*, as is practis'd by the *Dutch* (eſpecially in dry Land) becauſe the Places where I ſaw it, were very wet Land, which is often floated in *Winter*; ſo that if the Plants were not elevated upon Ridges, their Roots would rot in Winter. Secondly, They ſhould be planted at a greater Diſtance in *England*, the Rows ſhould be at leaſt three Feet Diſtance, and the Plants eighteen Inches aſunder in the Rows; for as they extend themſelves pretty far under-ground, ſo where they are planted too near, their Roots will not have Room to grow. And, thirdly, I find, that if all the horizontal Roots are deſtroy'd from time to time, as they are produced, it will cauſe the large downright Roots to be much bigger, in which the Goodneſs of this Commodity chiefly conſiſts: For if the upper Roots are ſuffered to remain, they will draw off the principal Nouriſhment from the downright Roots, as I have experienced; for I planted a few Roots upon the ſame Soil and Situation, which were of equal Strength, and rooted equally well; half of theſe I hoed round, and cut off the horizontal Roots, and the other half I permitted the horizontal Roots to remain on; and when I took them all up, thoſe which I had hoed about and kept clear from horizontal Roots, were almoſt as large again as the other, and the Roots were double the Weight; which plainly proves it neceſſary to cut off thoſe ſuperficial Roots.

The Manner of drying and preparing theſe Roots for Uſe, I am not acquainted with, having never had an Opportunity of ſeeing that Part, ſo can give no Inſtructions concerning it; but whoever ſhall have Curioſity enough to cultivate this uſeful Plant, might eaſily inform themſelves, by going over to *Holland* at the Seaſon of taking up the Roots.

The two Sorts of *Wild Madder* are of no Uſe; though their Roots ſeem to be of the ſame Quality with the manured Sort; and as they are never cultivated in Gardens, it is needleſs to ſay any thing more of them in this Place.

Theſe Plants love a looſe Soil, neither too dry nor over wet, but will do better in a dry than on a wet Soil, becauſe in ſuch Places the Roots are apt to rot in Winter.

RUBUS; The Bramble or Raſpberry-buſh.

The *Characters* are;

It hath a Flower conſiſting of five Leaves, which are placed circularly, and do expand in form of a Roſe; the Flower-cup is divided into five Parts, containing many Stamina, or Chives, in the Boſom of the Flower, in the Center of which riſes the Pointal, which afterwards becomes the Fruit, conſiſting of many Protuberances, and full of Juice.

The *Species* are;

1. Rubus; *major, fructu nigro. J. B.* The common Bramble *or* Black-berry-buſh.

2. Rubus; *minor, fructu cæruleo. J. B.* The Dewberry-buſh, *or* Leſſer Bramble.

3. Rubus; *vulgaris, major, fructu albo. Raii Syn.* The common Greater Bramble-buſh with white Fruit.

4. Rubus; *vulgaris, major, folio eleganter variegato.* The greater Bramble-buſh with a beautiful ſtrip'd Leaf.

5. Rubus; *Idæus, ſpinoſus, fructu rubro. J. B.* The Raſpberry-buſh, Framboiſe, *or* Hind-berry.

6. Rubus; *Idæus, ſpinoſus, fructu albo. J. B.* The Raſpberry-buſh with white Fruit.

7. Rubus; *Idæus, ſpinoſus, fructu rubro, ſerotino.* The Raſpberry-buſh with late red Fruit.

8 Rubus; *Idæus, non ſpinoſus. J. B.* The Raſpberry-buſh without Thorns.

9. Rubus; *Idæus, fructu nigro, Virginianus. Baniſter.* The Virginian Raſpberry-buſh with black Fruit.

10. Rubus; *odoratus. Cornut.* Virginian flowering Raſpberry; *vulgò.*

11. Rubus; *Americanus, magis erectus, ſpinis rarioribus, ſtipite cæruleo. Pluk. Alm.* The upright Penſilvania Bramble, *or* Raſpberry-buſh.

12. Rubus; *Alpinus, humilis. J. B.* Dwarf Bramble of the Alps.

The firſt and ſecond Sorts are very common in Hedges, and upon dry Banks in moſt Parts of *England*, and are rarely cultivated in Gardens. The third Sort was found by Mr. *Jacob Bobart* in a Hedge not far from *Oxford*, and hath ſince been cultivated in ſeveral Gardens as a Curioſity. This does not only differ from the common *Bramble* in the Colour of the Fruit, but alſo in the Colour of the Bark and the Leaves, which in this Sort are of a lively Green; whereas thoſe of the common Sort are of a dark brown Colour. The fourth Sort is a Variety of the common *Bramble*, differing therefrom only in having ſtrip'd Leaves, for which it is preſerv'd by ſome Perſons who are curious in collecting variegated Plants.

The *Raſpberry-Buſh* is alſo very common in divers Woods in the Northern Counties of *England*, but is cultivated in all curious Gardens for the Sake of its Fruit. Of this there are three Kinds, which are cultivated commonly in the Gardens near *London*; which are the common Red, late Red, and the White Sorts; but the Sort without Thorns is leſs common at preſent than the other.

The ninth, tenth, eleventh and twelfth Sorts are preſerv'd as Curioſities in ſeveral Gardens near *London*; but as their Fruits are of no Value, ſo they are ſcarcely worth cultivating, except in Botanick Gardens for Variety.

All theſe Plants are eaſily propagated by Suckers, which they ſend from the Roots in great Plenty. The beſt Time to take them off, and tranſplant them, is in *October*, that they may take good Root before Winter, which will cauſe them to be ſtrong, and produce Fruit the ſucceeding Summer.

In preparing theſe Plants, their Fibres ſhould be ſhorten'd; but the Buds which are plac'd at a ſmall Diſtance from the Stem of the Plant, muſt not be cut off, becauſe thoſe produce the new Shoots the following Summer. Theſe Plants ſhould be planted about two Feet aſunder in the Rows, and four or five Feet Diſtance Row from Row;

for if they are planted too cloſe, their Fruit is never ſo fair, nor will ripen ſo kindly as when they have Room for the Air to paſs between the Rows. The Soil in which they thrive beſt, is a freſh, ſandy Loam, neither too moiſt nor over dry, the Extreme of either being injurious to theſe Plants.

The Time for dreſſing of them is in *October*, when all the old Wood, which produc'd Fruit the preceding Summer, ſhould be cut out down to the Surface of the Ground, and the young Shoots muſt be ſhorten'd to about two Feet in Length; then the Spaces between the Rows ſhould be well dug to encourage their Roots; and if you bury a very little rotten Dung therein, it will make them ſhoot vigorouſly the Summer following, and their Fruit will be much fairer. During the Summer Seaſon they ſhould be kept clear from Weeds, which, with the before-mention'd Culture, is all the Management they will require: But it is proper to make new Plantations once in three or four Years, becauſe thoſe are better than ſuch Plants as are ſuffer'd to remain longer.

All the other Sorts are propagated from Suckers in the ſame Manner as the Garden *Raſpberries*, and are equally hardy, ſo that they may be placed in the open Air in any Part of the Garden, provided it be not over-moiſt, which is apt to rot the Roots of ſome Sorts in Winter, but eſpecially of the *Canada* Sort, which is apt to periſh if planted in a very wet Soil.

RUSCUS; Knee-Holly *or* Butchers-Broom.

The *Characters* are;

The Flower-cup conſiſts of one Leaf, which is cut into ſeveral Diviſions, out of which is produced a globular Bell-ſhap'd Flower, conſiſting alſo of one Leaf, in the Center of which riſes the Pointal, which afterwards becomes a ſoft roundiſh Fruit, in which is inclos'd one or two hard Seeds.

The *Species* are;

1. Ruscus; *myrtifolius, aculeatus. Tourn.* The common Knee-Holly *or* Butchers-Broom.

2. Ruscus; *anguſtifolius fructu folio innaſcente. Tourn.* Narrow-leav'd Butchers-Broom *or* Alexandrian Laurel, with the Fruit growing on the Leaves.

3. Ruscus; *latifolius, fructu folio, innaſcente. Tourn.* Broad-leav'd Butchers-Broom *or* Alexandrian Laurel, with the Fruit growing on the Leaves.

4. Ruscus; *anguſtifolius, fructu ſummis ramulis innaſcente. Tourn.* Narrow-leav'd Butchers-Broom *or* Alexandrian Laurel, with the Fruit growing upon the Tops of the Branches.

5. Ruscus; *latifolius, foliorum ſinu florifer & fructifer. H. Elt.* Broad-leav'd Alexandrian Laurel, with the Fruit growing upon the Edges of the Leaves.

The firſt Sort is very common in the Woods in divers Parts of *England*, and is rarely cultivated in Gardens. The Roots of this Kind are ſometimes uſed in Medicine, and the green Shoots are cut, and bound into Bundles, and ſold to the Butchers, who uſe it as Beſoms to ſweep their Blocks; from whence it had the Name of *Butchers-Broom.*

The ſecond, third, and fourth Sorts are hardy Plants, and tho' not Natives of *England*, yet may be preſerv'd in Gardens, if planted in a ſhady Situation, as in Wilderneſs-Quarters, *&c.* where they ſerve to intermix with other Wood Plants to make Variety; and the third

Sort is ſometimes uſed in Medicine. Theſe Plants may be propagated by parting their Roots in the Spring of the Year, before they begin to make new Shoots, obſerving, if the Seaſon be dry, to water them until they have taken Root; after which they will require no farther Care but to keep them clear from Weeds, obſerving not to tranſplant or diſturb their Roots oftner than once in three or four Years; for when they are often removed, they ſeldom thrive well, and do rarely produce Fruit.

The fifth Sort is tender, and muſt therefore be plac'd in Pots fill'd with freſh Earth, and in Winter put into the Green-houſe; but it ſhould be plac'd where it may have free Air in mild Weather, and be conſtantly water'd: In which Management, this Plant will ſend forth Stems ſix or eight Feet high, furniſh'd with Leaves from bottom to top, which in *June* will be cloſely ſet with Flowers upon their Edges, which do make a very beautiful and odd Appearance, and renders it worthy of a Place in every good Collection of Plants. This is alſo propagated by parting the Roots, as the former, which ſhould not be done very often, becauſe if the Roots are not permitted to remain ſome time to get Strength, they will produce but weak Shoots, and very few Flowers; and in the Strength of their Shoots, and Number of Flowers the greateſt Beauty of theſe Plants conſiſts.

It is generally ſuppos'd, that it was one of theſe Plants which the antient Victors were crown'd with; and from the Pliableneſs of their Branches, whereby they are very proper to wreath into any Figure, and from the Reſemblance thoſe Coronets, which we ſee ſurrounding the Heads of ſome antient Buſts, have to the Leaves of theſe Plants; it is a probable Conjecture at leaſt.

RUTA; Rue.

The *Characters* are;

The Flower for the moſt Part conſiſts of four hollow Leaves, which are plac'd orbicularly, and do expand in form of a Roſe; *out of whoſe Flower-cup riſes the Pointal, which afterwards becomes a roundiſh Fruit, which is generally four-corner'd, and compos'd of four Cells fix'd to an Axis, and full of ſmall angular Seeds.*

The *Species* are;

1. Ruta; *major, hortenſis, latifolia. Mor. Hiſt.* The common broad-leav'd Garden *Rue*.
2. Ruta; *hortenſis, minor, tenuifolia. Mor. Hiſt.* The leſſer Garden *Rue*, with narrow Leaves.
3. Ruta; *hortenſis, minor, tenuifolia, foliis variegatis argenteis. Boerh. Ind.* The leſſer Garden *Rue*, with narrow Leaves, variegated with White.
4. Ruta; *Chalepenſis, latifolia, florum petalis villis ſcatentibus H. L.* The broad-leav'd Aleppo *Rue*, whoſe Flower-leaves are beſet with Down.
5. Ruta; *Chalepenſis, tenuifolia, florum petalis, villis ſcatentibus. Mor. Hiſt.* Narrow-leav'd Aleppo *Rue*, whoſe Flower-leaves are beſet with Down.
6. Ruta; *ſylveſtris, major. C. B. P.* Greater Wild *Rue*.

There are ſome other Varieties of theſe Plants which are preſerv'd in curious Botanick Gardens, but thoſe here mention'd are all the Sorts which I have ſeen cultivated in the *Engliſh* Gardens.

The firſt Sort here mention'd, is that which the College of Phyſicians have directed to be uſed in Medicine.

Medicine, and is the moſt commonly cultivated in *England*.

The ſecond Sort is propagated but in few Gardens in *England*; tho' the third, which is a Variety of the ſecond, and only differing from it in having its Leaves variegated with White, is very common in *England*, being greatly cultivated by thoſe Gardeners who ſupply the *London* Markets with Plants in the Spring Seaſon, at which Time this Plant makes a beautiful Appearance; but as the Seaſon advances, and the Plants increaſe in Vigour, ſo the Variegation of the Leaves goes off, and they appear almoſt green, but their Colour returns again in Winter.

The two Sorts of *Aleppo Rue* are only preſerv'd in ſome curious Gardens, being rarely uſed in Medicine; though, of late Years, the broad-leav'd Sort was become ſo plenty, as to be brought to the Markets inſtead of the firſt Sort: But it being much ranker, and of a more offenſive Smell, it was neglected.

The greater Wild *Rue* is leſs common in *England* than either of the former. This I rais'd from Seeds, which were ſent me by my Honoured Friend Mr. *Henry Hopkey*, from *Gibraltar*, where this Plant grows upon the Hills in great Plenty.

All theſe Plants may be propagated either by ſowing of their Seeds, or by planting Slips or Cuttings, both of which muſt be done in the Spring. The Manner of propagating them from Cuttings being the ſame with *Roſemary*, *&c.* I ſhall not repeat it here, but refer the Reader to that Article; and if they are propagated by Seeds, there needs no farther Care but to dig a Bed of freſh Earth in the Spring, making it level; then to ſow the Seeds thereon, treading them in, and raking the Ground ſmooth: After which you muſt obſerve to keep the Bed clear from Weeds until the Plants are come up about two Inches high; when they ſhould be tranſplanted out into freſh Beds, where they may remain for Uſe. All theſe Plants muſt have a dry Soil, otherwiſe they are very ſubject to be deſtroy'd in Winter. The two *Aleppo Rues*, and the Wild *Rue* are ſomewhat tenderer than the common Sort; but theſe will endure our ordinary Winters very well in the open Air, eſpecially if they are planted on a dry Soil.

Theſe Plants were formerly uſed to plant for Edgings on the Sides of Borders; but they are by no means proper for this Uſe, for they ſhoot ſo vigorouſly that there is no keeping them within the Bounds of an Edging; beſides, when they are kept cloſely ſheer'd they appear very ragged and ſtumpy, and their Roots do ſpread ſo far, as to exhauſt the Goodneſs of the Soil, ſo that the other Plants would be depriv'd of their Nouriſhment; which Reaſons have caus'd them to be wholly neglected for this Purpoſe; ſo that, at preſent, they are chiefly cultivated for Medicinal Uſe, or to furniſh the Balconies of the Citizens in the Spring.

RUTA MURARIA; Wall-Rue *or* White Maidenhair.

This Plant is found growing out of the Joints of old Walls in divers Parts of *England*, where it is gathered for Medicinal Uſe; but as it can't be cultivated in Gardens, ſo as to grow to Advantage, I ſhall not ſay any thing more of it in this Place.

S A

SABINA; The Savine-Tree.

The *Characters* are;

It hath compact, rigid, and prickly Ever-green Leaves; the Fruit is ſmall, ſpherical, and warted, and the whole Plant has a very rank, ſtrong Smell.

The *Species* are;

1. Sabina; *folio Tamariſci, Dioſcoridis. C. B. P.* The Male *or* common Savin.

2. Sabina; *folio Cypreſſi. C. B. P.* The Berry-bearing *or* Upright Savin.

3. Sabina; *folio variegato.* The ſtrip'd Savin.

Theſe Plants are commonly cultivated for Medicinal Uſe; and are rarely planted in Gardens for Pleaſure, becauſe their ill Scent renders them diſagreeable in frequented Places; but yet they may be admitted for planting in Clumps, or to form Amphitheatres of Ever-green Trees; where if theſe are intermix'd amongſt other low-growing Plants, they will add to the Variety.

Theſe Plants may be propagated by laying down their young Branches in the Spring; which if duly water'd in dry Weather, will take Root in a Year's time, and may then be tranſplanted out either into a Nurſery, or the Places where they are to remain: They may alſo be propagated by Cuttings, which ſhould be planted on a moiſt Soil, about the Beginning of *April*, which, if duly water'd, will take Root; and the Spring following may be remov'd, as was directed for the *Layers*.

The Time for tranſplanting theſe Plants is the ſame with moſt other Ever-green Trees, (*viz.*) in *April*; obſerving to do it in cloudy Weather, laying a little Mulch upon the Surface of the Ground about their Roots to prevent their drying: After they are rooted, they will require no farther Care but to keep them clear from Weeds, and to dig the Ground about their Roots every Spring, which will greatly promote their Growth.

SAFFRON; *vide* Crocus.

SAGE; *vide* Salvia.

SALICARIA; Willow-wort *or* ſpiked Loſe-ſtrife.

The *Characters* are;

The Flowers conſiſt of ſeveral Leaves, which are plac'd circularly, and do expand in form of a Roſe; *theſe Leaves are produc'd from the Inciſures of the Flower-cup; from the Center of the Flower-cup riſes the Pointal, which afterwards becomes a Fruit or oval Husk, conſiſting of two Cells, and generally full of ſmall Seeds, which adhere to the* Placenta, *and are commonly wrapped up in the Flower-cup.*

The *Species* are;

1. Salicaria; *vulgaris, purpurea, foliis oblongis. Tourn.* Purple-ſpiked Willow-herb *or* Loſe-ſtrife, with long Leaves.

2. Salicaria; *purpurea, foliis ſubrotundis. Tourn.* Purple-ſpiked Willow-herb *or* Loſe-ſtrife, with roundiſh Leaves.

Theſe Plants are very common by the Sides of Ditches and other moiſt Places in divers Parts of *England*, and are rarely cultivated in Gardens; yet for the Beauty of their long Spikes of purple Flowers, they deſerve a Place in a good Garden, as alſo for their long Continuance

tinuance in Flower: However, if there happens to be a moiſt boggy Place in a Garden where few other Plants will thrive, theſe may be plac'd there to Advantage, and will afford a great deal of Pleaſure. They propagate themſelves very faſt by their creeping Roots, ſo that if they delight in the Soil, they will, in a ſhort time, multiply exceedingly. Theſe produce their Flowers in *June* and *July*, and do often continue till *Auguſt* in Beauty.

SALIX; The Sallow *or* Willow-Tree.

The *Characters* are;

It hath amentaceous Flowers, conſiſting of ſeveral Stamina, *which are collected into a Spike, but are barren; the Embryo's are produc'd upon different Trees from the Male Flowers, and do afterwards become a Fruit or Husk, ſhap'd like a Cone, opening in two Parts, and containing downy Seeds.*

The *Species* are;

1. SALIX; *vulgaris, alba, arboreſcens. C. B. P.* The common White Willow.

2. SALIX; *folio laureo, ſeu lato glabro odorato. Phyt. Brit.* The Bay-leav'd ſweet Willow.

3. SALIX; *folio longo, utrinque virente odorato.* The long-leav'd Sweet Willow.

4. SALIX; *folio longo, latoque, ſplendente, fragilis. Raii Syn.* The Crack Willow.

5. SALIX; *folio Amygdalino, utrinque aurito, corticem abjiciens. Raii Syn.* The Almond-leav'd Willow, that caſts its Bark.

6. SALIX; *folio auriculato, ſplendente, flexilis. Cat. Cant.* The round-ear'd ſhining Willow.

7. SALIX; *folio longo, ſubluteo, non auriculato, viminibus luteis. Raii Syn.* The long-leav'd yellowiſh Willow.

8. SALIX; *latifolia, rotunda. C. B. P.* Round-leav'd *Sallow*.

9. SALIX; *latifolia, rotunda, variegata.* The ſtrip'd *Sallow*.

10. SALIX; *latifolia, folia ſplendente. Raii Syn.* Broad ſhining-leav'd *Sallow*.

11. SALIX; *orientalis, flagellis deorſum, pulchrè pendentibus. T. Cor.* The Weeping Willow.

There are a greater Number of *Species* to be found in *England* than are here mentioned, eſpecially of the *Sallows*, as I have been inform'd by a very judicious Basket-maker: There are at leaſt thirty Sorts, which they diſtinguiſh by Name, commonly in uſe in their Trade; and beſides theſe, there are a great Number of Mountain *Willows* which grow upon dry Grounds; but as theſe are ſeldom cultivated, ſo it would be to little Purpoſe to enumerate them in this Place.

All the Sorts of *Willows* may be eaſily propagated by planting Cuttings or Sets in the Spring, which do readily take Root, and are of quick Growth. Thoſe Sorts which grow to be large Trees, and are cultivated for their Timber, are generally planted from Sets, which are about ſeven Feet long: Theſe are ſharpen'd at their larger End, and thruſt into the Ground by the Sides of Ditches and Banks where the Ground is moiſt; in which Places they make a conſiderable Progreſs, and are a great Improvement to ſuch Eſtates, becauſe their Tops will be fit to lop every third or fourth Year. The larger Wood, if found, is commonly ſold for making Wooden Heels, or Soles for Shoes, as alſo to the Turners for many Kinds of light Ware.

The *Sallows* are commonly planted in Cuttings, made from ſtrong Shoots of the former Year and are about three Feet long: Theſe are commonly thruſt down two Feet deep into the Ground, and are one Foot above it. The Soil ſhould always be dug or plough'd before they are planted, and the Cuttings plac'd about three Feet Row from Row, and eighteen Inches aſunder in the Rows, obſerving always to place the Rows the ſloping Way of the Ground, (eſpecially if the Tides overflow the Place) becauſe if the Rows are plac'd the contrary Ways, all the Weeds and Filth will be detain'd by the Plants, which will choak 'em up. The beſt Seaſon for planting theſe Cuttings is in *February*, for if they are planted ſooner, they are apt to peel, if it proves hard Froſt, which greatly injures them. Theſe Plants are always cut every Year, and if the Soil be good they will produce a great Crop; ſo that the yearly Produce of one Acre has been often ſold for fifteen Pounds, but ten Pounds is a common Price, which is much better than Corn Land: ſo that it is great Pity theſe Plants are not more cultivated, eſpecially upon moiſt boggy Soils, upon which few other Things will thrive.

SALVIA; Sage.

The *Characters* are;

It hath a labiated Flower, conſiſting of one Leaf, whoſe Upper-lip is ſometimes arched, and ſometimes hooked; but the Under-lip (or Beard) is divided into three Parts, bunching out, and not hollow'd as the Clary; *out of the Flower-cup riſes the Pointal, attended, as it were, by four Embryo's, which afterwards become ſo many Seeds, which are roundiſh, ſhut up in a Husk, which was before the Flower-cup: To which may be added, That the* Stamina *do ſomewhat reſemble the* Os Hyoidis.

The *Species* are;

1. Salvia; *major, an Sphacelus Theophraſti. C. B. P.* The greater or common Sage.

2. Salvia; *nigra. C. B. P.* Common Red Sage.

3. Salvia; *major, foliis ex viridi & albo variegatis, Boerh. Ind.* The greater Sage, with Leaves variegated with White and Green.

4. Salvia; *foliis verſicoloribus. C. B. P.* Party-colour'd Sage.

5. Salvia; *latifolia, ſerrata. C. B. P.* Broad-leav'd notch'd Sage.

6. Salvia; *latifolia, ſerrata, foliis ex albo variegatis.* Broad-leav'd Sage, with variegated Leaves.

7. Salvia; *abſinthium, redolens. J. B.* Wormwood Sage.

8. Salvia; *minor, aurita, & non aurita. C. B. P.* Sage of Virtue.

9. Salvia; *minor, foliis variegatis. H. R. Par.* Sage of Virtue, with ſtrip'd Leaves.

10. Salvia; *Orientalis, latifolia, abſinthium redolens, flore carneo magno. Boerh. Ind.* Broad-leav'd Eaſtern Sage, ſmelling like Wormwood, with a large Fleſh-colour'd Flower.

11. Salvia; *Orientalis latifolia, hirſutiſſima, viſcoſa, pinnata, flore & calice purpureis, inodora. Boerh. Ind.* Eaſtern Sage, with broad, hairy, clammy-winged Leaves, with a purple Flower and Flower-cup, without Smell.

12. Salvia; *Africana, fruteſcens, folio ſcorodoniæ, flore violaceo. H. A.* Shrubby African Sage, with a Wood Sage Leaf, and a Violet-colour'd Flower.

13. Salvia; *Africana, fruteſcens, folio ſubrotundo, glauco, flore aureo magno.*

magno. *H. A.* Shrubby African Sage, with roundiſh Sea-green Leaves, and a large Golden-Flower.

14. SALVIA; *Orientalis, abſinthium redolens, foliis pinnatis, flore carneo elatior. Sher.* Eaſtern Upright Wormwood-Sage, with winged Leaves and a Fleſh colour'd Flower.

15. SALVIA; *Hiſpanica, folio lavendulæ. Tourn.* Spaniſh Sage, with a Lavender-leaf.

There are ſeveral other *Species* of this Plant which are preſerv'd in ſome curious *Botanick* Gardens abroad; but thoſe here mention'd are what I have obſerv'd in the *Engliſh* Gardens.

The firſt Sort, tho' the moſt common in many Parts of *Europe*, yet is but rarely to be ſeen in the *Engliſh* Gardens; but the red Sort is moſt commonly cultivated in this Country, which many Perſons ſuppoſe to be only a Variety of the common Sort; but it conſtantly preſerves its Difference when rais'd from Seeds, as I have two or three times experimented; ſo that I don't ſcruple to make it a diſtinct *Species*, ſince its Difference from the common is much greater than in ſome of the other Sorts of *Sage*, particularly the *Sage of Virtue*, and the *Lavender-leav'd Sage*; both which, when cultivated in a good Soil, are ſo nearly alike, as not to be diſtinguiſh'd by the beſt *Botaniſts*. This *Red Sage*, the *Wormwood Sage*, and *Sage of Virtue*, are the principal Sorts which are cultivated for Uſe in *England*; tho' the *broad-leav'd Sage* is much preferable to the *Sage* of *Virtue* for *Tea*, it giving the Water a much more grateful Flavour, and is eſteem'd to be of a leſs drying Quality; ſo that moſt Perſons who are Lovers of *Sage-Tea*, do prefer this for that Purpoſe.

All the Sorts of *Sage* (except the eleventh Sort, which is but annual) may be propagated by planting Cuttings or Slips, during any of the Summer Months, obſerving to water and ſhade them until they have taken Root; after which they may be taken up, and planted where they are deſign'd to remain, which ſhould always be upon a dry Soil; and where they may have the Benefit of the Sun; for if they are planted on a moiſt Soil, or in a ſhady Situation, they are very ſubject to be deſtroy'd in Winter; nor will theſe Plants endure the Cold ſo well when planted upon a rich Soil, as thoſe which have a barren, dry, rocky Soil, which is the Caſe of moſt of the Verticillate Plants. The Side-ſhoots and Tops of theſe Plants may be gather'd in the Summer, and dry'd, if deſign'd for *Tea*; otherwiſe they are beſt taken green from the Plants for moſt other Uſes.

The twelfth, thirteenth, and fourteenth Sorts are ſomewhat tender, therefore theſe muſt be planted into Pots fill'd with freſh, light, ſandy Earth; and in Winter muſt be remov'd into the Conſervatory, where they ſhould be plac'd as near the Windows as poſſible, that they may have a great Share of freſh Air whenever the Seaſon is mild; for if they are too much drawn, they ſeldom flower well, and make but an indifferent Appearance: In Summer they muſt be expos'd amongſt other *Exotick* Plants in ſome well-ſhelter'd Situation, for they are pretty hardy, and do only require to be ſhelter'd from Froſt and ſtrong Winds. Theſe Plants muſt be often refreſh'd with Water, (eſpecially in warm Weather) otherwiſe they will ſhrivel and decay; and they ſhould be tranſplanted at leaſt twice every Summer, becauſe their Roots do greatly increaſe; which, if confin'd in the Pots too long, will turn mouldy, and decay. The other Oriental Sorts are hardy enough to endure the Cold of our ordinary Winters in the open Air, provided they are planted in a dry Soil, and a warm Situation.

Theſe Plants may alſo be propagated by ſowing their Seeds in the Spring upon a Bed of freſh Earth, obſerving to keep the Ground clear from Weeds until the Plants are come up; when they ſhould be tranſplanted into Beds of freſh Earth, and treated as thoſe rais'd from Cuttings or Slips.

SALVIA AGRESTIS; *vide* Scordium.

SAMBUCUS; The Elder-Tree.

The *Characters* are;

The Branches are full of Pith, having but little Wood; the Flowers are monopetalous, divided into ſeveral Segments, and expand in Form of a Roſe; theſe are for the moſt Part collected into an Umbel, and are ſucceeded by ſoft ſucculent Berries, having three Seeds in each.

The *Species* are;

1. SAMBUCUS; *fructu in umbellâ nigro.* *C. B. P.* Common Elder, with black Berries.

2. SAMBUCUS; *fructu in umbellâ viridi.* *C. B. P.* Common Elder, with greeniſh Berries.

3. SAMBUCUS; *fructu albo.* *Lob.* The white-berry'd Elder.

4. SAMBUCUS; *racemoſa rubra.* *C. B. P.* The Mountain red-berry'd Elder.

5. SAMBUCUS; *laciniato folio.* *C. B. P.* The Cut *or* Parſley-leav'd Elder.

6. SAMBUCUS; *vulgaris, foliis ex luteo variegatis.* The blotch'd-leav'd Elder.

7. SAMBUCUS; *humilis, ſive Ebulus.* *C. B. P.* Dwarf-Elder *or* Danewort.

The firſt of theſe Trees is very common in the Hedges in moſt Parts of *England*, but the ſecond and third Sorts are more rare; theſe are propagated for the Sake of their Berries, which are by ſome Perſons uſed for making Wine, and for other Purpoſes. The fourth Sort is leſs common in *England* than either of the former, it being only to be found in ſome curious Gardens at preſent. The fifth and ſixth Sorts are preſerved for the Variety of their Leaves, by ſuch as are curious in collecting the various Kinds of Trees and Shrubs.

All theſe Sorts may be eaſily propagated from Cuttings, or by ſowing their Seeds; but the former being the moſt expeditious Method, is generally practis'd. The Time for planting of their Cuttings is any time from *September* to *March*, in the doing of which there needs no more Care than to thruſt the Cuttings about ſix or eight Inches into the Ground, and they will take Root faſt enough; and may afterwards be tranſplanted where they are to remain; which may be upon almoſt any Soil or Situation; they are extream hardy, and if their Seeds are permitted to fall upon the Ground, they will produce a Plenty of Plants the ſucceeding Summer.

Theſe Trees are often planted for making Fences, becauſe of their quick Growth, but as their Bottoms become naked in a few Years, ſo they are not ſo proper for that Uſe; neither would I recommend them to be planted near Habitations, becauſe at the Seaſon when they are in Flower, they emit ſuch a ſtrong Scent, as will occaſion

Violent Pains in the Heads of thoſe who abide long near 'em; beſides, the crude Parts which are continually perſpired through their Leaves are accounted unwholſome, though the Leaves, Bark, and other Parts are greatly eſteemed for many Uſes in Medicine.

The *Dwarf-Elder* is found wild in ſome Counties of *England*, but near *London* it is propagated in Gardens for Medicinal Uſe; though very often the Herb-women in the Markets do give the tender Shoots of the *Elder Tree* inſtead of this, to ſuch Perſons as can't diſtinguiſh them aſunder.

This Plant multiplies exceeding faſt by its creeping Root, which, if permitted to run, will ſoon overſpread a large Spot of Ground; the Off-ſets of theſe Roots may be tranſplanted any time from *September* to *March*, and will grow in any Soil or Situation, but ſhould be allowed Room to ſpread, for if they are planted near other Plants, they will over-run and deſtroy them.

SANGUIS DRACONIS; *vide* Palma.

SANICULA; Sanicle.

The *Characters* are;

It is an umbelliferous Plant, whoſe Flower conſiſts of five Leaves placed orbicularly, but are generally bent back to the Center of the Flower, reſting on the Empalement, which becomes a Fruit compos'd of two Seeds, that are gibbous and prickly on one Side, but plain on the other; ſome of the Flowers are always barren.

There is but one *Species* of this Plant at preſent in *England, viz.*

SANICULA; *officinarum. C. B. P.* Sanicle *or* Self-heal.

This Plant is found wild in Woods and ſhady Places in moſt Parts of *England*, but being a Medicinal Plant may be propagated in Gardens for Uſe: It may be increaſed by parting of the Roots, any time from *September* to *March*, but it is beſt to do it in Autumn, that the Plants may be well rooted before the dry Weather in Spring comes on: They ſhould have a moiſt Soil and a ſhady Situation, in which they will thrive exceedingly.

SANTOLINA; Lavender Cotton.

The *Characters* are;

It hath a globoſe floſculous Flower, conſiſting of many Florets, divided into ſeveral Segments, ſitting on the Embryo, contained in the intermediate little Leaves, hollowed like a Gutter, and a ſquamous hemiſpherical Empalement; the Embryo afterwards becomes a Seed, not at all furniſh'd with Down. To theſe Notes muſt be added, larger Flowers than thoſe of Wormwood and Southernwood, and alſo the whole Face of the Plant.

The *Species* are;

1. SANTOLINA; *foliis teretibus. Tourn.* Common Lavender Cotton.

2. SANTOLINA; *flore majore, foliis villoſis & incanis. Tourn.* Lavender Cotton, with a larger Flower and hoary Leaves.

3. SANTOLINA; *foliis Ericæ vel Sabinæ. Tourn.* Green-leav'd Lavender Cotton, with a Scent like Ointment.

4. SANTOLINA; *foliis Cypreſſi. Tourn.* Cypreſs-leav'd Lavender Cotton.

5. SANTOLINA; *repens & caneſcens. Tourn.* Creeping and hoary Lavender Cotton.

6. SANTOLINA; *foliis minus incanis. Tourn.* Lavender Cotton, with leſs hoary Leaves.

7. SANTOLINA; *foliis obſcurè virentibus, flore aureo. Tourn.* Laven-

ton, with dark-green Leaves
olden Flower.

NTOLINA; *foliis Roriſmarini*
Tourn. Greater Lavender
with Roſemary Leaves.

NTOLINA; *vermiculata, Cre-*
urn. Vermiculated Laven-
ton of Candia.

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, 'till *Auguſt*, when they ſhould
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they are deſign'd to remain:
the Ground is not ready by that Time to receive 'em, it will be proper to let them remain in the Border until Spring; for if they are tranſplanted late in Autumn, they are liable to be deſtroy'd by a little Cold in Winter.

Theſe Plants are very hardy, and if planted in a lean, gravelly, or ſandy dry Soil, will continue many Years, and reſiſt the Cold very well; but if they are in a wet or rich Soil, they are often deſtroy'd in Winter.

SAPONARIA; *vide* Lychnis.

SATUREJA; Savory.

The *Characters* are;

It is a Plant of the verticillate Kind, with a labiated Flower, whoſe Upper-lip, or Creſt, is divided into two Parts; but the Lower-lip, or Beard, is divided into three Parts, the middle Part being crenated: Theſe Flowers are produced from the Wings of the Leaves, in a looſe Order, and not in Whorles or Spikes, as are moſt of this Tribe of Plants.

The *Species* are;

1. SATUREJA; *ſativa. J. B.* Garden *or* Summer Savory.
2. SATUREJA; *montana. C. B. P.* Winter Savory.
3. SATUREJA; *Virginiana. Par. Bat.* Virginian Savory.

The firſt of theſe Plants is annual, and is propagated by ſowing of the Seeds upon a Bed of light, freſh Earth, in *March*; and when the Plants are come up, they muſt be tranſplanted into other Beds, placing them about four or five Inches aſunder each Way; obſerving to do this in moiſt, cloudy Weather, becauſe at ſuch Times the Plants will ſoon take Root; but if the Seaſon ſhould prove hot and dry; they muſt be diligently water'd until they have taken Root, after which they will require no farther Care, but to keep 'em clear from Weeds; and in *July* they will flower, at which Time they ſhould be cut for medicinal Uſe; but thoſe Plants which are left will produce ripe Seeds in *September*, provided the Autumn be favourable.

The *Winter Savory* is an abiding Plant, and may be propagated by Slips or Cuttings, which, if planted in a Bed of light, freſh Earth, in the Spring, and carefully watered, will take Root in a ſhort Time, and may then be tranſplanted where they are to remain. This Plant ſhould have a dry Soil, in which it will endure the Cold very well, as may be ſeen by its growing in ſome Places upon the Tops of Walls, where it defies the ſevereſt Cold of our Climate.

Theſe Plants were formerly more cultivated in *England* than at preſent, they being very little in uſe to what they were formerly, when they enter'd moſt Diſhes of Soups, *&c.* but at preſent they are very little uſed in the Kitchen, and are chiefly cultivated for medicinal Uſe.

SATYRION; *vide* Orchis.

SAVIN; *vide* Sabina.

SAVORY; *vide* Satureja.

SAXIFRAGA; Saxifrage.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves, placed orbicularly, which expand in Form of a Roſe out of whoſe multifid Flower-cup riſes the Pointal, which commonly ends in two Horns, and afterwards turns, together with the Flower-cup, into a roundiſh Fruit, which has likewiſe two Horns, and two Cells, which are full of ſmall Seeds.

The *Species* are;

1. SAXIFRAGA; *rotundifolia, alba. C. B. P.* White round-leav'd *Saxifrage.*

2. SAXIFRAGA; *rotundifolia, alba, flore pleno. Boerh. Ind.* White round-leav'd *Saxifrage*, with a double Flower.

3. SAXIFRAGA; *Alpina, ericoides, flore cæruleo. Tourn.* Mountain Heath-like Sengreen with a blue Flower.

4. SAXIFRAGA; *ſedi folio, flore albo, multiflora. Tourn.* Many-flower'd *Saxifrage*, with a Houſeleek Leaf and a white Flower, *commonly called* Pyramidal Sedum.

5. SAXIFRAGA; *ſedi folio, anguſtiore, ſerrato. Tourn. Saxifrage*, with a narrow, ſerrated, Houſeleek Leaf.

The firſt of theſe Plants is very common in moiſt Meadows, in divers Parts of *England*, and is rarely cultivated in Gardens. This is what the *College of Phyſicians* have directed to be uſed in Medicine, under the Title of *White Saxifrage*, to diſtinguiſh it from *Meadow Saxifrage*, which is an umbelliferous Plant, of a very different Nature and Appearance from this.

The ſecond Sort is a Variety of the firſt, which was found wild by Mr. *Joſeph Blind*, Gardener at *Barns*, who tranſplanted it into his Garden, and afterwards diſtributed it to ſeveral curious Perſons; ſince which Time it hath been multiplied ſo much, as to become a very common Plant in moſt Gardens near *London*, where it is commonly planted in Pots to adorn Court-yards, *&c.* in the Spring.

This Plant is propagated by Offſets, which are ſent forth from the old Roots in great Plenty. The beſt Seaſon for tranſplanting them is in *July*, after their Leaves are decay'd, when they muſt be put into freſh undung'd Earth, and placed in the Shade until Autumn; but in Winter they may be expoſed to the Sun, which will cauſe 'em to flower ſomewhat earlier in the Spring.

. In *April* theſe Plants will r, and if they are in large will at that Time make a handſome Appearance; for Reaſon moſt People ſuffer to remain three or four Years oved, and when they are lanted, do always plant 'em ches, that they may produce ter Number of Flowers. If Plants are put into the full d, they muſt have a ſhady on, otherwiſe they will not

third Sort is a low, creeping which lies upon the Surface e Ground, ſomewhat like this grows wild in the Nor- Counties of *England*, and is cultivated in Gardens.

fourth Sort is propagated Sake of its ſpecious Flowers. brought from the *Alps* and Mountains, where it grows It is uſually planted in Pots, ith freſh, light Earth, and Summer Seaſon placed in ade, but in the Winter it be expoſed to the Sun; and Off-ſets ſhould be taken off, the Plant ſingle, which will to produce a much ſtronger for Flowering; for when re Off-ſets about the old they exhauſt the Nouriſh- om it, whereby it is rendred weaker. Theſe Off-ſets muſt planted in a ſeparate half- Pot, fill'd with freſh Earth, r to ſucceed the older Plants generally periſh after Flower- Theſe Off-ſets will produce s the ſecond Year, ſo that ſhould be annually ſome of lanted, to ſucceed the others. theſe Plants are ſtrong and , they will produce a Stem wers full three Feet high, divides into Branches in a pyramidal Order, and are beſet with Flowers from Bottom to Top, ſo as to make a beautiful Figure; and as it uſually flowers in *June*, ſo it is commonly placed in Chimnies of Halls, where it will continue in Flower a long Time, provided it have Water duly given it, and will afford an agreeable Proſpect.

The fifth Sort is alſo a Native of the *Alps*, but will grow very well in Gardens; and tho' the Flowers are not very beautiful, yet for the Variety of its ſerrated, ever-green Leaves, it may have a Place in every good Garden. This may be propagated by Off-ſets, and requires the ſame Management as the former.

SCABIOSA; Scabious.

The *Characters* are;

It hath a floſculous Flower, conſiſting of many unequal Florets, contained in a common Empalement. Some of theſe which occupy the Middle are cut into four or five Segments; the reſt which are placed at the Edge, are bilabiated; each of theſe ſits on the Top of an Embryo, which is crowned; and is contained in a proper Empalement, which afterwards becomes a Capſule, either ſimple or Funnel-ſhap'd, pregnant with a Seed crown'd, which before was the Embryo.

The *Species* are;

1. SCABIOSA; *pratenſis, hirſuta, quæ officinarum. C. B. P.* Common Field *Scabious.*

2. SCABIOSA; *integrifolia, glabra, radice præmorſâ. H. L.* Whole-leav'd *Scabious, or* Devil's-bit.

3. SCABIOSA; *ſtellata, folio non diſſecto. C. B. P.* Starred *Scabious*, with an undivided Leaf.

4. SCABIOSA; *ſtellata, folio laciniato, major. C. B. P.* Greater ſtarred *Scabious*, with a cut Leaf.

5. SCABIOSA; *peregrina, rubra, capitulo oblongo. C. B. P.* Red Indian *Scabious*, with longiſh Heads, *commonly called*, Musk *Scabious*.

6. SCABIOSA; *peregrina, capitulo oblongo, flore carneo. H. R. Par.* Indian or Musk *Scabious*, with longiſh Heads and a fleſh-colour'd Flower.

7. SCABIOSA; *peregrina, capitulo oblongo, flore atropurpureo. H. R. Par.* Indian or Musk *Scabious*, with longiſh Heads, and a dark purple Flower.

8. SCABIOSA; *peregrina, capitulo oblongo, flore variegato. H. R. Par.* Indian or Musk *Scabious*, with oblong Heads and a variegated Flower.

9. SCABIOSA; *Indica, prolifera. H. Edinb.* Indian childing *Scabious*.

10. SCABIOSA; *Africana, fruteſcens. Par. Bat. Ic.* African ſhrubby *Scabious*.

11. SCABIOSA; *Africana, fruteſcens, folio rigido ſplendente ſerrato, flore albicante. H. A.* African ſhrubby *Scabious*, with a ſtiff, ſhining, ſerrated Leaf, and a whitiſh Flower.

12. SCABIOSA; *Alpina, folio centaurii majoris. C. B. P.* Alpine *Scabious*, with a greater Centaury Leaf.

There are many other Sorts of *Scabious's*, which are preſerved in Botanick Gardens for Variety; but thoſe here mention'd are the principal Sorts which are propagated for the Beauty of their Flowers. The firſt Sort here mention'd grows wild in divers Parts of *England*, upon Arable Land; as doth the ſecond in Woods and ſhady Places almoſt every where: The firſt of theſe is what the *College of Phyſicians* have directed to be uſed, under the Title of *Scabious*; though the People who ſupply the Markets do generally bring the ſecond Sort inſtead thereof; but it may be eaſily known therefrom by its hairy, divided Leaves. The ſecond Sort the *College* have directed to be uſed under the Title of *Devil's-bit*, which Name it received from the lower Part of its Root being commonly eaten off.

Both theſe Plants are very common in the Fields and Woods, but may be propagated in Gardens, by ſowing their Seeds in the Spring upon a Bed of freſh Earth; and when the Plants are come up, they muſt be tranſplanted into other Beds of freſh Earth, at about eight or ten Inches diſtance, obſerving to water 'em until they have taken Root, after which they will require no further Culture, but to keep 'em clear from Weeds, and the ſecond Summer they will flower and produce Seeds, but their Roots will abide many Years, and may be parted, to propagate the *Species*.

The third Sort will grow to the Height of four or five Feet, and have a wooden Trunk. This is preſerved in Green-houſes in Winter, by ſuch as are curious in foreign Plants. It may be propagated by planting Slips or Cuttings in Pots of freſh Earth, during any of the Summer Months, which, if placed in a moderate Hot-bed, watered and ſhaded, will take Root in a ſhort Time; after which they may be inur'd to the open Air by Degrees, into which they ſhould be remov'd to continue abroad until *October*, when they muſt be carried into Shelter, but muſt have as much free Air as poſſible in mild Weather; for they only require to be protected from hard Froſt, and to be frequently watered. This Plant produces Flowers moſt part of the Year, for which it is chiefly preſerved, tho' the Flowers have not more Beauty nor Scent than the common Field Sort.

The fourth Sort is an annual Plant, which is preſerved in the Gardens of the Curious; but the Flowers of this are very like thoſe of the former Sort, and have no Scent.

The *Indian* or *Musk Scabious's* are preſerv'd for the Beauty and ſweet Scent of their Flowers, which continue a long Time: Theſe are propagated by ſowing of their Seeds, the beſt Time for which is about the latter End of *May* or the Beginning of *June*, that the Plants may get Strength before Winter; for if they are ſown too early in the Spring, they will flower the Autumn following, and the Winter coming on ſoon, will prevent their ripening Seeds; beſides, there will be fewer Flowers upon thoſe, than if they had remained ſtrong Plants thro' the Winter, and had ſent forth their Flower-ſtems in Spring, for theſe will branch out on every Side, and produce a prodigious Number of Flowers, and continue a Succeſſion of them on the ſame Plants, from *June* to *September*, and produce good Seeds in Plenty.

The Seeds of theſe Plants ſhould be ſown upon a ſhady Border of freſh Earth (for if they are ſown upon a Place too much expoſed to the Sun, and the Seaſon ſhould prove dry, few of them would grow): When the Plants are come up, they may be tranſplanted into other Beds or Borders of freſh Earth, obſerving to water and ſhade them until they have taken Root, after which they will require no farther Care, but to keep 'em clear from Weeds, 'till *Michaelmas*, when they may be tranſplanted into the Middle of the Borders in the Pleaſure-Garden, where the ſeveral Sorts being intermixed, will make an agreeable Variety. They are extream hardy, being rarely injured by Cold, unleſs they have ſhot up to flower before Winter, but do ſeldom continue after ripening their Seeds.

The two *African Tree Scabious's* are abiding Plants, which are preſerved in Pots, and houſed in Winter, as the third Sort. Theſe may be propagated by Slips or Cuttings, as the third, and require the ſame Management.

The twelfth Sort is preſerved by ſuch as are curious in collecting Varieties of Plants, but the Flowers have no Scent; however, as it is a hardy Plant, requiring no other Culture than the common Field Sorts, ſo it may be admitted, for Diverſity, into the Pleaſure-Garden, becauſe it will thrive in ſhady Places, where few other Plants will grow.

SCILLA; Squils.

The *Characters* are;

It hath a large, acrid, bulbous Root, like an Onion: The Leaves are broad; the Flowers are like thoſe of Ornithogalum, or the ſtarry Hyacinth: They grow in a long Spike, and come out before the Leaves.

The *Species* are;

1. SCILLA; *vulgaris, radice rubra.* C. B. P. Common red *Squil.*

2. SCILLA; *radice alba.* C. B. P. The White *Squil.*

Theſe Plants are very common upon the ſandy Shoars of *Spain* and the *Levant*, from whence their Roots are annually brought to *England*, for Medicinal Uſe. But I was lately informed by a Letter from Dr. *William Stevens*, Profeſſor of Botany at *Dublin*, that the *White Squil* grows in great Plenty upon the Sea Coaſt of the County of

Kerry in *Ireland*; which is the only Place in which it has been found growing wild in theſe Parts of *Europe*. But altho' theſe Roots are brought over chiefly for Medicinal Uſe, yet are they worthy of being cultivated in every good Garden, for the Beauty of their Flowers, which make a very handſome Appearance when they are ſtrong Roots.

The beſt Time to tranſplant theſe Roots is in *May*, when their Leaves are decay'd; or if the Roots are brought from abroad, if they can be procured firm at that Seaſon, or a little after, they ſhould be planted in Pots of light, ſandy Earth, and placed in the Windows of the Green-houſe, where, if they are blowing Roots, they will flower the *July* following.

Theſe Plants muſt be preſerved in Shelter, during the Winter Seaſon, becauſe if their Leaves are deſtroy'd by Froſt in Winter, the Roots are ſubject to periſh; but in Summer they ſhould be expos'd to the open Air, and in dry Weather they muſt be frequently water'd, eſpecially during the Seaſon their Leaves are on, or that they are in Flower; but when the Roots are in a State of Reſt, they ſhould have but little Moiſture, for Wet at that Time will rot them. They are pretty hardy, and do only require to be ſheltered from hard Froſt; but muſt have as much free Air as poſſible in open Weather.

SCLAREA; Clary.

The *Characters* are;

It is a verticillate Plant with a labiated Flower, conſiſting of one Leaf, whoſe Upper-lip, or Creſt, is hooked, but the Under-lip, or Beard, is divided into three Parts, the middle Segment being hollow and bifid; out of the Flower-cup riſes the Pointal, attended by four Embryo's, which afterwards turn to ſo many roundiſh Seeds, incloſed in a Husk, which was before the Flower-cup.

The *Species* are;

1. Sclarea; *Tabern. Ic.* Common Garden Clary.

2. Sclarea; *vulgaris, lanuginoſa, ampliſſimo folio. Tourn.* Common downy Clary, with a large Leaf.

3. Sclarea; *laciniatis foliis. Tourn.* Clary with jagged Leaves.

4 Sclarea; *Luſitanica, glutinoſa, ampliſſimo folio. Tourn.* Portugal Clary, with a large glutinous Leaf.

5. Sclarea; *Indica, flore variegato. Tourn.* Indian Clary, with a variegated Flower.

6. Sclarea; *rugoſa, verrucoſa, & laciniato folio. Tourn.* Clary with a rough, warted and jagged Leaf.

7. Sclarea; *glutinoſa, floris lutei, variegati, barbâ amplâ cavâ. Boerh. Ind.* Glutinous Clary, with a yellow variegated Flower, having a large hollow Beard, *commonly call'd*, Jupiter's Diſtaff.

8. Sclarea; *folio ſalviæ, minor, ſive glabra. Tourn.* Leſſer or ſmooth Clary, with a Sage Leaf.

9. Sclarea; *Orientalis, folio Betonicæ acutiſſimo, comâ purpuraſcente. T. Cor.* Eaſtern Clary, with a ſharp-pointed Betony Leaf, and a purpliſh Top.

10. Sclarea; *pratenſis, foliis ſerratis, flore ſuave rubente. Tourn.* Meadow Clary, with ſerrated Leaves, and a ſoft red Flower.

The common *Garden Clary* is chiefly cultivated in *England* for Medicinal Uſe, but the other Sorts are preſerved in Botanick Gardens, for the Sake of Variety, with many other Sorts of leſs Note; however, thoſe here mention'd are worthy of a Place in large Gardens, where, if they are intermix'd among other large growing Plants, they will afford a pretty Variety, eſpecially the fifth, eighth, ninth, and tenth Sorts, which produce long Spikes of beautiful Flowers, and continue a long time in Flower.

All theſe Sorts may be propagated by ſowing of their Seeds upon a Bed of freſh Earth in *March*, and when the Plants are come up, they ſhould be tranſplanted into Beds of freſh Earth, about eight Inches aſunder, obſerving to water 'em until they have taken Root, after which they will require no farther Care, but to keep them clear from Weeds until *Michaelmas*, when they ſhould be tranſplanted into the Places where they are to remain, placing them at a large Diſtance, for they ſpread pretty far, provided the Soil be good. If theſe Plants are planted for a Crop, intended for medicinal Uſe, they ſhould be planted in Rows two Feet and a half aſunder, and the Plants eighteen Inches diſtant in the Rows: But the other Sorts to be placed in Borders, ſhould be planted eight or ten Feet diſtant, being intermixed with other Plants. Some of theſe Sorts will endure many Years, provided they are planted on a freſh Soil, not over moiſt or rich; but others do rarely continue longer than the ſecond Year, periſhing ſoon after they have perfected their Seeds; theſe ſhould therefore be often renewed from Seeds, to have a Continuance of 'em; but the other Sorts may be increaſed by parting their Roots, the beſt Time for which is at *Michaelmas*, when their Stems begin to decay.

SCORDIUM; Water Germander.

The *Characters* are;

The Flowers are like thoſe of Germander, *which are produced from the Wings of the Leaves; the Flower-cup is tubulous, and the whole Plant ſmells like Garlick.*

The *Species* are;

1. SCORDIUM; *C. B. P.* Common Water Germander.

2. SCORDIUM; *alterum, ſive Salvia agreſtis. C. B. P.* Wild Sage, *vulgò*.

3. SCORDIUM; *fruteſcens, folio anguſto Salvia, flore luteolo. Boerh. Ind.* Shrubby wild Sage, with a narrow Sage Leaf and yellowiſh Flowers.

The firſt of theſe Plants grows wild in moiſt Places in the Iſle of *Ely*, in great Plenty, but near *London* it is propagated in Gardens for medicinal Uſe. This Plant is increaſed by parting the Roots, or from Cuttings or Slips; the beſt Time for this Work is in the Beginning of *March*. Theſe Slips muſt be planted in Beds of moiſt Earth, about four or five Inches aſunder, obſerving to water them well until they have taken Root, after which they will require no further Care but to keep 'em clear from Weeds, and in *July* the Plants will be fit to cut for medicinal Uſe, being at that Time in Flower. But it is not proper to tranſplant them every Year, for then the Crop will be ſmaller, therefore every other Year will be ſufficient to renew theſe Beds; nor ſhould they be planted again upon the ſame Ground, but upon a freſh Spot, otherwiſe they will not thrive.

The *Wild Sage* is very common in Woods and ſhady Places in divers Parts of *England*, and is rarely cultivated in Gardens, except by thoſe who are curious in Botany. This may be propagated by ſowing the Seeds in the Spring, upon a Bed of freſh Earth, and when the Plants are come up, they ſhould be tranſplanted out, at about a Foot aſunder, upon a light, freſh Soil, obſerving to water them until they have taken Root, after which they will require no further Care, but to keep 'em clear from Weeds, for they are extream hardy, and will abide many Years in almoſt any Soil or Situation.

The third Sort is of a more tender Nature, and requires to be ſhelter'd from ſevere Froſt, to which if it be expoſed, it is often deſtroy'd. This may be propagated by ſowing the Seeds as the former, but when the Plants come up, they ſhould be placed in Pots of freſh Earth, and in Winter put in an airy Part of the Green-houſe, where they may enjoy the free Air when the Weather is mild, for if they are too much drawn, they are ſubject to mould and decay. In the Summer Seaſon they ſhould be expoſed to the open Air, with Myrtles and other Foreign Plants, and muſt be frequently refreſh'd with Water.

SCORPIOIDES; Caterpillars.

The *Characters* are;

It hath a papilionaceous Flower, out of whoſe Impalement riſes the Pointal, which afterwards becomes a jointed Pod, convoluted like a Snail or Caterpillar, having a Seed in each Joint, which is for the moſt part of an Oval Figure.

The *Species* are;

1. SCORPIOIDES; *Bupleuri folio. C. B. P.* The great rough Caterpillar.

2. SCORPIOIDES; *Bupleuri folio, corniculis aſperis, magis in ſe contortis & convolutis. Mor. Hiſt.* Prickly Caterpillar.

3. SCORPIOIDES; *Bupleuri folio, ſiliquis levibus. Park. Theat.* Smooth-podded Caterpillar.

4. SCORPIOIDES; *ſiliquâ craſſa. Boelii. Ger. Emac.* Thick-podded Caterpillar.

Theſe Plants are preſerved in ſeveral curious Gardens, for their Oddneſs more than for any great Beauty: They are all of them annual Plants, which are propagated by ſowing their Seeds upon a Bed of light, freſh Earth, and when the Plants are come up, they ſhould be thinned, ſo as to leave 'em about ten Inches or a Foot aſunder, becauſe their Branches trail upon the Ground, and if they have not Room, they are apt to over-bear each other, and thereby are very often rotted, eſpecially in moiſt Seaſons. The Weeds ſhould alſo be diligently clear'd from 'em, otherwiſe they will grow over and deſtroy 'em: In *June* theſe Plants will produce ſmall, yellow, papilionaceous Flowers, which are ſucceeded by Pods, ſo much like Caterpillars, that a Perſon at a ſmall Diſtance would imagine they were real Caterpillars feeding on the Plants; and it is for this Oddneſs of their Pods that theſe Plants are chiefly preſerved.

Theſe Plants do ſeldom thrive well if they are tranſplanted, therefore the beſt Method is to put in three or four good Seeds, in each Place where you would have the Plants remain (which may be in the Middle of large Borders in the Pleaſure-Garden, where being intermix'd with other Plants, they will afford a pleaſing Variety:) When the Plants come up, there ſhould be only one of the moſt promiſing left in each Place, which ſhould be conſtantly kept clear from Weeds, and when their Pods are ripe, they ſhould be gathered and preſerved in a dry Place 'till the following Spring, in order to be ſown.

The firſt, third, and fourth Sorts are the beſt worth cultivating, their Pods being large and more viſible than the other, and are more in Form of a Caterpillar.

SCORZONERA; Viper's-Graſs.

The *Characters* are;

It hath a ſemi-floſculous Flower, conſiſting of many half Florets, which reſt upon the Embryo's, which are included in one common Empalement, which is ſcaley: The Embryo's do afterwards become oblong Seeds, which are furniſh'd with Down.

The *Species* are;

1. SCORZONERA; *latifolia, ſinuata. C. B. P.* Common *or* broad-leav'd Viper's-Graſs, with an indented Leaf.

2. SCORZONERA; *latifolia, altera. C. B. P.* Another broad-leav'd Viper's-Graſs.

3. SCORZONERA; *laciniatis foliis. Tourn.* Viper's-Graſs, with jagged Leaves.

The firſt of theſe Sorts is what the College of Phyſicians have directed for Medicinal Uſe: And it is alſo cultivated for the Uſe of the Kitchen in divers Gardens near *London*, though, at preſent, it is not ſo much propagated as it hath been ſome Years ſince, when it was more commonly brought to the Markets.

The ſecond Sort is equally as good as the firſt for all the Purpoſes for which that is cultivated; but as it is leſs common, ſo it is rarely found in *England*, except in *Botanick* Gardens, where the third Sort is alſo cultivated for Variety, but is never apply'd to any Uſes.

Theſe Plants may be propagated by ſowing their Seeds in the Spring upon a Spot of light freſh Soil. The beſt Method of ſowing them, is, to draw ſhallow Furrows by a Line about a Foot aſunder, into which you ſhould ſcatter the Seeds, thinly covering them over about half an Inch thick with the ſame light Earth; and when the Plants are come up, they ſhould be thinned where they are too cloſe in the Rows, leaving them at leaſt ſix Inches aſunder, and, at the ſame Time, you ſhould hoe down all the Weeds to deſtroy them: And this muſt be repeated as often as is neceſſary; for if the Weeds are permitted to grow among the Plants, they will draw them up weak, and prevent their Growth.

There are many People who ſow theſe Seeds promiſcuouſly in a Bed, and afterwards tranſplant them out at the Diſtance they would have them grow: But this is not ſo well as the former Method, becauſe their Roots do commonly ſhoot downright, which in being tranſplanted are often broken, ſo that they never will make ſo fair Roots as thoſe which remain in the ſame Place where they are ſown; for when the extream Part of the Root is broken, it never extends itſelf in Length afterwards, but only ſhoots out into many forked ſmall Roots, which are not near ſo valuable as thoſe which are large and ſtrait. Theſe Roots may be taken up when their Leaves begin to decay, at which time they have done growing; tho' they may remain in the Ground until Spring, and may be taken up as they are us'd: But thoſe which remain in the Ground after *March*, will ſhoot up their Flower-ſtems; after which they are not ſo good, being ſticky and ſtrong.

If you intend to ſave Seeds of theſe Plants, you ſhould let a Parcel of the beſt remain in the Places where they grew; and when their Stems are grown to their Height, they ſhould be ſupported with Stakes, to prevent their falling to the Ground or breaking. In *June* they will flower, and about the Beginning of *Auguſt* their Seeds will ripen, when they ſhould be gather'd, and preſerv'd dry till the Spring following for Uſe.

SCROPHULARIA; Figwort.

The *Characters* are;

It hath an anomalous Flower, conſiſting of one Leaf, gaping at both Sides, and generally globular, cut as it were into two Lips; under the upper one of which are two ſmall Leaves: The Pointal riſes out of the Flower-cup, which afterwards turns to a Fruit or Husk, with a roundiſh-pointed End, opening into two Diviſions, parted into two Cells by an intermediate Partition, and full of ſmall Seeds, which adhere to the Placenta.

The *Species* are;

1. SCROPHULARIA; *nodoſa fœtida. C. B. P.* Stinking knobbed-rooted Figwort.

2. SCROPHULARIA; *aquatica, major. C. B. P.* Greater Water Figwort.

3. SCROPHULARIA; *Hiſpanica, ſambuci folio glabro. Tourn.* Spaniſh Figwort, with a ſmooth Elder-leaf.

4. SCROPHULARIA; *maxima, Luſitanica, ſambuci folio lanuginoſo. Tourn.* Greateſt Portugal Figwort, with a woolly Elder-leaf.

5. SCROPHULARIA; *ruta canina dicta, vulgaris. C. B. P.* Figwort, *commonly called,* Dogs Rue.

6. SCROPHULARIA; *ſaxatilis lucida, laſerpitii Maſſilienſis foliis. Boc. Muſ.* Shining Rock Figwort, with Leaves like the Marſeilles Laſerwort.

7. SCROPHULARIA; *glauco folio, in amplas lacinias diviſo. Tourn.* Figwort, with a Sea-green Leaf divided into large Segments.

8. SCROPHULARIA; *foliis filicis, modo laciniatis, vel ruta canina latifolia. C. B. P.* Figwort, with Leaves jagged after the manner of Fern, or broad-leav'd Dog's-Rue.

There are ſeveral other *Species* of this Plant which are preſerv'd in ſome curious *Botanick* Gardens, but thoſe here mention'd being the moſt beautiful, and beſt worth preſerving, it would be needleſs to enumerate the other Sorts in this Place.

The firſt Sort here mention'd, grows wild in great Plenty in Woods and other ſhady Places in divers Parts of *England*, and is rarely cultivated in Gardens; but this being the Sort which the College of Phyſicians have directed for Medicinal Uſe, under the Title of *Scrophularia Major*, is by ſome preſerved in their Phyſick-Gardens.

The ſecond Sort is alſo very common in moiſt Places, and by the Sides of Ditches almoſt every where. This is alſo an officinal Plant, and ſtands in the Catalogue of Simples, under the Title of *Betonica aquatica, i. e. Water-Betony*, becauſe the Leaves are ſomewhat like thoſe of *Betony*.

Theſe two Plants may be eaſily propagated in Gardens, by ſowing their Seeds early in the Spring upon a Bed of freſh Earth, in a ſhady Situation; and when the Plants are come up, they ſhould be tranſplanted out into a ſtrong, moiſt Soil, about two Feet aſunder, obſerving to water them until they have taken Root; after which they will require no farther Care but to hoe down the Weeds between them from time to time as they are produc'd. The ſecond Year theſe Plants will ſhoot up to flower, and if

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ripe Seeds in *July*, which may be gather'd in the Pods, and preſerv'd for Uſe. The Roots of theſe Plants will abide three or four Years, unleſs deſtroy'd by great Cold, and may be parted to increaſe them: But theſe Plants which are propagated from Slips do ſeldom flower ſo ſtrong as thoſe produc'd from Seeds, ſo that it is the beſt Way to raiſe every Year ſome from Seeds to ſucceed the old Roots.

The fifth, ſixth, ſeventh and eighth Sorts are alſo tender, and will rarely endure the Cold of our Winters without Shelter, unleſs in ſome very warm Situations; therefore theſe ſhould be planted in Pots fill'd with freſh, light Earth, and ſhelter'd in Winter as the two former Sorts. Theſe may be propagated either from Seeds, as the former, or from Cuttings; but the former being the beſt Way, is generally practis'd, becauſe the Plants rais'd from Seeds do always flower much ſtronger than thoſe produc'd from Cuttings, and likewiſe grow more regular. Theſe Sorts will abide two or three Years, if defended from Froſt in Winter, but if they ſhould continue longer, they are ſeldom ſo beautiful as young Plants, ſo that they ſhould be often renew'd from Seeds.

SECALE; Rie.

The *Characters* are;

The Flowers have no Leaves, but conſiſt of ſeveral Stamina, *which are produc'd from the Flower-cup: Theſe Flowers are collected into a flat Spike, and are diſpos'd almoſt ſingly; from the Flower-cup riſes a Pointal, which afterwards becomes an oblong ſlender Seed incloſ'd in a Husk which was before the Flower-cup. This differs from* Wheat, *in having a flatter Spike, the Awn larger and more naked.*

The *Species* are;

1. Secale; *hybernum, vel majus. C. B. P.* Common *or* Winter Rie.

2. Secale; *vernum & minus. C. B. P.* Leſſer *or* Spring Rie.

Theſe are all the Sorts of *Rie* which are at preſent known in *England*. The Manner of ſowing and husbanding theſe Plants being ſo well known to every Farmer, it would be needleſs to ſay any thing of it in this Place, more than that the firſt muſt be ſown in *Autumn*, as *Wheat*; but the other may be ſown in the Spring, at the Seaſon for *Barley*, and will ripen almoſt as ſoon as that which was ſown in Autumn; which is a great Advantage in ſuch Countries, where it is ſubject to be deſtroy'd in Winter.

SECURIDACA; Hatchet-Vetch.

The *Characters* are;

It hath a papilionaceous Flower, out of whoſe Empalement riſes the Pointal, which afterwards becomes an upright, plain, annual articulated Pod, containing in each Joint a Rhomboid Seed, having a Notch on the inner Side.

We have but one *Species* of this Plant in *England, viz.*

Securidaca; *lutea major. C. B. P.* The greater Yellow Hatchet-Vetch.

This Plant grows amongſt the Corn in *Spain, Italy*, and other warm Countries; but in *England* it it preſerv'd in Botanick Gardens for the Sake of Variety. This may be propagated by ſowing the Seeds in Borders of light freſh Earth in the Spring, in the Places where they are to abide; for they ſeldom ſucceed well if they are tranſplanted: They ſhould be allow'd at leaſt two Feet Diſtance, becauſe their Branches trail upon the Ground: In *June* theſe Plants will flower, and in *Auguſt* their Seeds will ripen, when they ſhould be gather'd, and preſerv'd for Uſe. A few of theſe Plants may be admitted into every good Garden for Variety, tho' there is no great Beauty in their Flowers.

SEDUM; Houſeleek.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves, which are plac'd orbicularly, and expand in Form of a Roſe; out of whoſe Flower-cup riſes the Pointal, which afterwards turns to a Fruit, compos'd, as it were, of many Seed-veſſels, reſembling Husks, which are collected into a Sort of Head, and full of ſmall Seeds.

The *Species* are;

1. Sedum; *majus, vulgare. C. B. P.* Common great Houſeleek.

2. Sedum; *minus, luteum, folio acuto. C. B. P.* The moſt ordinary Prickmadam, or ſharp-pointed Yellow Houſeleek.

3. Sedum; *minus, luteum, ramulis reflexis. C. B. P.* Yellow Stonecrop, with reflected Flowers.

4. Sedum; *parvum acre flore luteo. J. B.* Wall Pepper, *or* Stonecrop.

5. Sedum; *minus, à rupe Sancti Vincentii. Raii Syn.* Stonecrop of St. Vincent's Rock.

6. Sedum; *minus, teretifolium album. C. B. P.* White flower'd Stonecrop, with round-pointed Leaves.

7. Sedum; *minus, circinato folio. C. B. P.* Leſſer Stonecrop, with round Leaves.

8. Sedum; *majus, vulgari ſimile, globulis decidentibus. Mor. Hiſt.* Houſeleek, like the common Sort, throwing off the young ones.

9. Sedum; *montanum, tomentoſum. C. B. P.* Mountain woolly

Houſeleek, commonly call'd, *Cobweb Houſeleek*.

10. SEDUM; *majus arboreſcens. J. B.* Greater Tree Houſeleek.

11. SEDUM; *majus arboreſcens, foliis elegantiſſimè variegatis tricoloribus. Boerh. Ind.* Greater Tree Houſeleek, with beautiful variegated Leaves.

12. SEDUM; *Canarinum, foliis omnium maximis. H. A.* The greateſt Houſeleek of the Canaries.

13. SEDUM; *Afrum, ſaxatile, foliolis ſedi vulgaris, in roſam verè compoſitis. Boerh. Ind.* African Rock Houſeleek, with ſmall Leaves, like the common Sort, collected like a Roſe.

14. SEDUM; *Afrum, montanum, foliis ſubrotundis, dentibus albis ſerratis, confertim natis. Boerh. Ind.* African Mountain Houſeleek, with roundiſh, indented, ſerrated Leaves, with white Edges.

15. SEDUM; *Africanum, fruteſcens, folio longo ſerrato, confertim nato. Boerh. Ind.* African Shrubby Houſeleek, with long ſerrated Leaves.

The firſt Sort is very common in *England*, being often planted upon the Tops of Houſes, and other Buildings, where being preſerv'd dry, it will endure the greateſt Cold of our Climate This is directed by the College of Phyſicians to be us'd in Medicine as a great Cooler. It may be propagated by planting the Off-ſets (which are produc'd in great Plenty from the old Plants) any time in Summer. It requires to be plac'd very dry; for if its Roots are moiſt, the Plants will rot in cold Weather.

The ſecond. third, fourth, ſixth, and ſeventh Sorts grow in Plenty upon Walls and Buildings in divers Parts of *England*, where they propagate themſelves by their trailing Branches, ſo as in a ſhort time to cover the whole Place, provided they are not cut off. The ſixth Sort is alſo preſcrib'd by the College of Phyſicians to enter ſome officinal Compoſitions; but the People who ſupply the Markets, do commonly ſell the Wall Pepper inſtead of this; which is a very wrong Practice, becauſe the ſixth Sort is a very cold Herb, and is accordingly directed to be put into cooling Ointments; and the Wall Pepper is an exceeding ſharp acrid Plant (from whence it receiv'd the Name of Wall Pepper) which renders it contrary to the Intention of the Phyſician; therefore whoever makes uſe of theſe Plants, ſhould be very careful to have the right, otherwiſe it is better to uſe the common great Sort, in which they are not ſo liable to be impos'd on.

The fifth Sort is a Native of St. *Vincent's Rock* in *Cornwal*, from whence it hath been taken, and diſtributed into the ſeveral Gardens of ſuch Perſons as are curious in preſerving a Variety of Plants.

Theſe Plants are all extreme hardy, and will thrive exceedingly, if planted in a dry Soil, and an open Situation, where they will propagate themſelves by their trailing Branches, which take Root whereever they touch the Ground.

The eighth and ninth Sorts do propagate themſelves by Off-ſets, in the manner as the common Sort, though the eighth throws off the young ones from the Top of the old Plants, which, falling on the Ground, take Root, and thereby are increas'd very plentifully. Theſe are both very hardy, and if planted in a dry rubbiſh Soil will thrive, and endure the ſevereſt Cold of our Climate.

The tenth Sort is propagated by planting Cuttings during any of the Summer Months, which ſhould be laid in a dry Place a Fortnight after they are cut from the old Plants, that their wounded Parts may heal over before they are planted, otherwiſe they are ſubject to rot. Theſe ſhould be planted in Pots fill'd with light, freſh, ſandy Earth, and plac'd in a ſhady Situation (but not under the Drip of Trees) obſerving to give 'em now and then a little Water, when the Earth is dry; but you muſt be very careful not to let them have too much Moiſture, which will rot 'em.

When they have taken Root, they may be remov'd into a more open Situation, placing 'em amongſt other Exotick Plants, in a Place where they may be defended from ſtrong Winds; in which Situation they may remain until Autumn, when they muſt be remov'd into the Conſervatory, to be preſerv'd from Cold in Winter, which will deſtroy 'em. Tho' they do not require any artificial Heat, but only to be protected from Froſt, yet do they require to have as much free Air as poſſible in mild Weather; therefore the beſt Way of preſerving theſe Plants, is to have an airy Glaſs-caſe, in which many Sorts of *Ficoides's*, and other ſucculent Plants, may be intermix'd with theſe, where they will thrive much better than if placed amongſt *Oranges*, *Myrtles*, and other Trees in a Green-houſe; becauſe the Perſpiration of thoſe Trees renders the Air of the Place damp, and when the Houſe is cloſely ſhut up, this Air is often rancid, which being imbib'd by the *Houſeleeks*, will cauſe their Leaves to fall off, and the Plants will decay ſoon after; whereas in an open airy Glaſs-caſe, where there are none but ſucculent Plants, there will never be near ſo much damp in the Air, and in ſuch Places they will thrive and flower almoſt every Winter, when the Plants have gotten ſufficient Strength. Theſe Plants in moiſt Weather will ſend forth long Roots from their Branches, four or five Feet from the Ground, and if the Earth is plac'd near to theſe Roots, they will ſtrike into it, and the Branches may be afterwards ſeparated from the old Plants.

The eleventh Sort is a Variety of the tenth, which was accidentally obtain'd in the Gardens of the late Dutcheſs of *Beaufort* at *Badmington*, from a Branch which broke off from one of the plain Sort of *Houſeleek* Trees by accident, and being planted in Lime Rubbiſh afterwards, became beautifully variegated; from which Plant there have been vaſt Numbers rais'd, and diſtributed into many curious Gardens, both at Home and Abroad. This is propagated in the ſame manner as the former, and requires the ſame Management in Winter; but the Soil in which it is planted ſhould be one half freſh ſandy Soil, and the other half Lime Rubbiſh and Sea Sand, equally mix'd, in which it will thrive much better than in a rich Soil: You muſt alſo be very careful not to give it too much Water in Winter, which will cauſe it to caſt its Leaves and decay. With this Management theſe Plants will grow to be eight or ten Feet high, and will produce beautiful Spikes of Flowers every Year, which are commonly in Beauty in Winter,

and

re thereby more valuable for
g at a Seaſon when few o-
'lants do flower. Sometimes
Plants will produce ripe Seeds,
, if permitted to fall upon
arth of the Pots, will come
e Summer following, from
e a great Stock of the Plants
e produc'd; tho' as they do
ily take Root from Cuttings,
will be no occaſion to propa-
hem any other Way.

: twelfth Sort ſeldom produ-
y Side Branches, but grows
one ſingle large Head, with
large Leaves. This is only
ated from Seeds, for when
lants produce their Flowers,
lways decay ſo ſoon as the
is ripe; therefore the Seed
either be ſown in Pots fill'd
light, ſandy Earth as ſoon as
pe, or permitted to ſhed up-
e Pots where they grew;
muſt be ſhelter'd from the
in Winter, and the Spring
ing the young Plants will
up in Plenty; when they
be tranſplanted into Pots
vith freſh, light Earth, and
d in Summer with other Ex-
Plants, in ſome well-ſhelter'd
on, where they may remain
ctober, when they ſhould be
with the foregoing Sorts,
anag'd in the ſame manner
h been directed for them.
Plants will flower in four or
ears from Seed, provided
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Succeſſion of young Plants,
ere may be annually ſome to
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: thirteenth and fourteenth
re of ſmaller Growth: Theſe
rely riſe above ſix Inches
but ſend forth a great Quantity of Heads from their Sides, which if taken off and planted in freſh, light, ſandy Earth, will take Root, and make freſh Plants, which may be preſerv'd in Pots, and hous'd in Winter with the other Sorts before mention'd, and require to be treated in the ſame Way.

The fifteenth Sort grows to be ſhrubby, and may be propagated by planting the Cuttings in the manner directed for the Tree *Houſeleek*, and muſt alſo be hous'd in Winter, and treated in the ſame manner as hath been already directed for that Sort.

Theſe are all of them very ornamental Plants in the Green-houſe, and add greatly to the Variety, when plac'd amongſt other curious Exotick Plants.

SENECIO; Groundſel.

The *Characters* are;

It hath a floſculous Flower, conſiſting of many Florets, divided into ſeveral Segments, ſitting on the Embryo, contain'd in an Empalement, conſiſting of one Leaf, and divided into many Parts, afterwards becoming of a conical Figure: the Embryo afterwards becomes a Seed, furniſh'd with Down; at which time, the Empalement is reflex'd to make way for the Seeds to eſcape.

The *Species* are;

1. Senecio; *minor, vulgaris. C. B. P.* Common Groundſel.

2. Senecio; *Africanus, arboreſcens, folio ſerrato. Boerh. Ind.* African Tree-like Groundſel, with a ſerrated Leaf.

3. Senecio; *Virginianus, arboreſcens, atriplicis folio. Par. Bat.* Virginian Groundſel-Tree, with an Orach Leaf.

4. Senecio; *Africanus, arboreſcens, folio ficoidis. Com. Prel.* African Groundſel-Tree, with a Ficoides Leaf.

The firſt Sort here mention'd is one of the moſt common Weeds upon Dunghills, old Walls, and Gardens, that we have in *England*; ſo that inſtead of cultivating it, it requires ſome Pains to deſtroy it in Gardens: for if it be ſuffer'd to ſeed in a Garden (which it ſoon will do if permitted to ſtand) it will be very difficult to extirpate it. This is ſometimes us'd in Medicine, but its chief Uſe in *England* is to feed Birds.

The ſecond Sort grows to a Shrub of ſeven or eight Feet high, and produces its Flowers, in Summer and Autumn, at the Extremity of the Branches, in Bunches; which tho' of no great Beauty, yet ſerves to add to the Variety of Exotick Plants in the Green-houſe. This Plant may be propagated by planting the Cuttings, during any of the Summer Months, in a Bed of freſh, rich Earth, obſerving to water and ſhade them until they have taken Root, after which they will require no farther Care but to keep them clear from Weeds until *Auguſt*, when they ſhould be taken up carefully, and planted into Pots fill'd with light rich Earth, and plac'd in a ſhady Situation until they have taken Root; after which they may be remov'd to a more open Situation, where they may remain till the latter End of *October*; when they ſhould be remov'd into the Green-houſe, placing them in the coldeſt Part thereof, for they only require to be ſhelter'd from ſevere Froſt, and muſt have as much free Air as poſſible in mild Weather; and be after refreſh'd with Water: In Summer they may be expos'd with *Myrtles*, *Oleanders*, and other hardy Exotick Plants, where they will add to the Variety.

The third Sort doth grow to be a large woody Shrub, about ten or twelve Feet high, but is hardly to be train'd up into a regular Figure, for the Branches are produced ſo irregularly, that it makes but an indifferent Figure in a Garden; but being a hardy Shrub, it is often preſerved by ſuch as are curious in collecting the various Sorts of hardy Plants.

This may be propagated by planting Cuttings, taken from the tender Wood, in the Spring of the Year, obſerving to water and ſhade them until they have taken Root; after which they muſt be carefully kept clear from Weeds, which is all the Management they will require until the ſucceeding Spring, when they ſhould be tranſplanted either into the Places were they are deſigned to grow, or into a Nurſery, where they may be trained up another Seaſon; though it is the beſt Way to plant them where they are to remain, when they are taken from the Bed where they were raiſed, becauſe theſe Plants are with Danger removed when they are grown very woody.

The beſt Time to remove them is in the Beginning of *April*, juſt before they ſhoot; and they ſhould be placed in a light Soil and a warm Situation, where they will endure the Cold of our ordinary Winters without any Shelter, but in very ſharp Winters they are ſometimes deſtroy'd. This Shrub produces its Flowers in *October*, which altho' not very beautiful, yet are eſteemed by ſome for their coming ſo late in the Seaſon.

The fourth Sort is a very beautiful ſucculent Plant; the Leaves, which are long, thick, and juicy, are cover'd over with a glaucous

ſomewhat like Plums, and
being broken, do emit a
Turpentine Odour, which
caſioned ſome ignorant Per-
o give it the Name of *Bal-*
ee.

s Plant is eaſily propagated
nting Cuttings of it during
the Summer Months (which
be taken from the old Plants
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l, and laid in a dry Place for
Wounds to heal over, other-
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lanted in Pots of light, ſan-
rth, and placed in a Situa-
vhere they may enjoy the
ng Sun, obſerving to refreſh
with Water, gently, as the
in the Pots dries: In this
they may remain for eight
Days, after which the Pots
be plunged into a moderate
d, which will greatly facili-
eir taking Root: After they
oted, they may be again ex-
to the open Air, placing
mongſt *Ficoides*, *Sedums*, and
xotick ſucculent Plants, in a
elter'd Situation, where they
main till the *October* follow-
vhen they ſhould be remo-
to the Conſervatory, placing
mongſt the before-mention-
culent Plants in an airy Glaſs-
vhere they may be defended
Froſt, but ſhould have as
free Air as poſſible in mild
er; for if they are ſhut up
oſe in Winter, or have the
on of any artificial Heat, the
will decay and fall off, and
nts will loſe their Beauty;
as if they are treated in a
r Manner, and have the Ad-
e of a dry, free Air, they
ppear extream beautiful, and
throughout the Winter.

The Management of this Plant being nearly the ſame as moſt of the *Ficoides* do require, I ſhall not repeat any Part of that in this Place, but deſire the Reader to turn back to that Article for any farther Directions.

SENNA.

The *Characters* are;

The Flower for the moſt part conſiſts of five Leaves, which are placed orbicularly, and do expand in Form of a Roſe; the Pointal afterwards becomes a plain, incurved, bivalve Pod, which is full of Seeds, each being ſeparated by a double, thin Membrane.

The *Species* are;

1. Senna; *Italica, foliis obtuſis.* C. B. P. Italian *Senna* with blunt-pointed Leaves.

2. Senna; *Americana, Liguſtri folio. Plum.* American *Senna* with a Privet Leaf.

3. Senna; *Alexandrina, ſive foliis acutis.* C. B. P. Alexandrian *Senna* with ſharp-pointed Leaves.

The two firſt *Species* are preſerv'd in ſeveral curious Gardens in *England*; but the third Sort, which is that uſed in Medicine, is at preſent very rare in this Country.

Theſe Plants may be propagated by ſowing their Seeds upon a Hot-bed early in the Spring, and when the Plants are come up, they ſhould be tranſplanted into ſmall Pots, fill'd with light, freſh Earth, and plunged into a new Hot-bed, obſerving to water and ſhade them until they have taken Root; after which they ſhould have Air admitted to them, by raiſing the Glaſſes in Proportion to the Warmth of the Seaſon, and the Bed in which they are placed; you muſt alſo obſerve to refreſh them with Water from time to time, as the Earth in the Pots ſhall require; and when the Roots of the Plants have filled the Pots, they ſhould be ſhifted into other Pots a Size larger, obſerving to take off the Roots which are matted round the Outſide of the Ball of Earth next the Pot; and then fill up the Pots with the ſame freſh Earth, and plunge them into the Hot-bed again, giving 'em Air and Water in Proportion to the Warmth of the Seaſon and the Bed in which they are placed: In this manner they muſt be treated until Autumn, when they muſt be removed into the Stove, and plunged into the Bark-bed, where during the Winter Seaſon, they muſt be carefully preſerved, refreſhing them with Water every three or four Days, according as the Earth in the Pots dries. This Stove ſhould be kept above temperate Heat in Winter, otherwiſe the Plants will not live therein. The Summer following the two firſt *Species* will flower and produce Seed, but the third Sort is an annual Plant, and rarely perfects its Seeds in this Country.

SENNA THE BLADDER; *vide* Colutea.

SENNA THE SCORPION; *vide* Emerus.

SENSIBLE PLANT; *vide* Mimoſa.

SERPYLLUM; Mother of Thyme.

The *Characters* are;

It hath trailing Branches, which are not ſo woody and hard as thoſe of Thyme, but in every other reſpect is the ſame.

The *Species* are;

1. SERPYLLUM; *vulgare, majus, flore purpureo. C. B. P.* Greater common Mother of Thyme with a purple Flower.

2. SERPYLLUM; *vulgare, minus. C. B. P.* Common ſmaller Mother of Thyme.

3. SERPYLLUM; *vulgare, flore amplo. Raii Syn.* Common Mother of Thyme with a large Flower.

4. SERPYLLUM; *citratum. Ger. Emac.* Lemon Thyme.

5. SERPYLLUM; *odore juglandis. J. B.* Mother of Thyme ſmelling like Wallnuts.

6. SERPYLLUM; *vulgare, hirſutum. Raii Syn.* Hairy wild Thyme.

7. SERPYLLUM; *latifolium, hirſutum. C. B. P.* Broad-leav'd, hairy, wild Thyme.

8. SERPYLLUM; *vulgare, majus, flore albo. C. B. P.* Greater wild Thyme with a white Flower.

9. SERPYLLUM; *vulgare, minus, folio ex albo & viridi vario. H. L.* Leſſer wild Thyme with variegated Leaves.

The eight firſt mentioned Sorts do grow wild upon Heaths, and other large open Places, in divers Parts of *England*, where in the Summer Time when they are in Flower, they afford an agreeable Proſpect, and being trod upon, do emit a grateful aromatick Scent. Their common Places of Growth are upon ſmall Hillocks, where the Ground is dry and uncultivated, where, in a ſhort time, they propagate themſelves plentifully, both from Seeds and by their trailing Branches, which take Roots at their Joints, and ſo extend themſelves every Way.

There are but two of theſe *Species* commonly cultivated in Gardens, *viz.* the *Lemon Thyme*, and that with *ſtrip'd Leaves*; the firſt for its agreeable Scent, and the other for the Beauty of its variegated Leaves; theſe were formerly planted to edge Borders, but as

they

are very apt to ſpread, and
ult to preſerve in Compaſs,
ıey are diſuſed at preſent for
Purpoſe.

these do propagate themſelves
faſt, by their trailing Branches,
h ſtrike out Roots from their
s into the Earth, and thereby
new Plants; ſo that from a
of each, there may ſoon be
e Stock increaſed. They may
nſplanted either in Spring or
mn, and love an open Situa-
and a dry undunged Soil, in
h they will thrive and flower
dingly, and continue ſeveral

SAMUM; Oily-grain.

The *Characters* are;

Flowers are produced from
ings of the Leaves, without a-
t-ſtalk; the Flower-cup conſiſts
Leaf, divided into five long,
egments; the Flower is of
eaf, in Shape like thoſe of the
ve; the Pointal, which riſes
Middle of the Flower, after-
becomes an oblong, four-cor-
Pod, divided into four diſtinct
which are replete with eſculent

The *Species* are;

Sesamum; *J. B.* Common
grain.

Sesamum; *alterum, foliis tri-*
rientale, ſemine obſcuro. Pluk.
Another Eaſtern Oily-grain
rifid Leaves and dark-colour'd

Sesamum; *Orientale, trifidum,*
iveo. Hort. Compt. Eaſtern
grain with trifid Leaves and
Flowers.

eſe three Sorts are often pro-
ouſly cultivated in the Fields
la, Egypt, Candy, &c. where
habitants uſe the Seeds for
and of late Years theſe Plants
been introduced in *Carolina,*
where they ſucceed extremely well: The Inhabitants of that Country make an Oil from the Seed, which will keep many Years, and not take any rancid Smell or Taſte, but in two Years becomes quite mild; ſo that when the warm Taſte of the Seed, which is in the Oil when firſt drawn, is wore off, they uſe it as Sallad-Oil, and for all the Purpoſes of Sweet-Oil.

In *England* theſe Plants are preſerved in Botanick Gardens, as Curioſities: Their Seeds muſt be ſown in the Spring upon a Hot-bed, and when the Plants are come up, they muſt be tranſplanted into a freſh Hot-bed to bring 'em forward; after they have acquired a tolerable Degree of Strength, they ſhould be planted into Pots filled with rich, light, ſandy Soil; and plunged into another Hot-bed, managing them as hath been directed for *Amaranthus's*, to which I ſhall refer the Reader, to avoid Repetition. For if theſe Plants are not brought forward thus in the former part of the Summer, they will not produce good Seeds in this Country; though after they have flowered, if the Seaſon is favourable, they may be expoſed in a warm Situation with other annual Plants. When theſe Plants have perfected their Seeds, they decay, and never continue longer than one Seaſon.

The Seed of the firſt Sort is mentioned in the Liſt of *Officinal Simples* in the *College Diſpenſatory*, but is rarely uſed in Medicine in *England*. From nine Pounds of this Seed, which came from *Carolina*, there were upwards of two Quarts of Oil produced, which is as great a Quantity as hath been known to be drawn from any Vegetable whatever, and this I ſuppoſe might occaſion its being called *Oily-grain*.

SIDERITIS; Iron-wort.

The *Characters* are;

It is a Plant with a labiated Flower, conſiſting of one Leaf, whoſe Upper-Lip, or Creſt, is upright, but the Under-lip, or Beard, is divided into three Parts; out of the Flower-cup riſes the Pointal, attended as it were by four Embryo's, which afterwards turn to ſo many oblong Seeds, ſhut up in a Husk, which was before the Flower-cup: To theſe Marks muſt be added, the Flowers growing in Whorles at the Wings of the Leaves, which are cut like a Creſt, and differ from the other Leaves of the Plant.

The *Species* are;

1. SIDERITIS; *hirſuta, procumbens. C. B. P.* Hairy trailing Iron-wort.

2. SIDERITIS; *Alpina, hyſſopifolia. C. B. P.* Hyſſop-leav'd Iron-wort of the Alps.

3. SIDERITIS; *Orientalis, phlomidis folio. T. Cor.* Eaſtern Iron-wort with a Phlomis Leaf.

There are ſeveral other *Species* of this Plant, which are preſerved in ſome curious Botanick Gardens for Variety; but as they are Plants of little Beauty, ſo they are ſeldom cultivated in other Gardens.

All theſe Plants may be propagated by ſowing their Seeds in the Spring, upon a Bed of freſh light Earth, and when the Plants are come up, they may be tranſplanted out into other Beds, allowing 'em a Foot Diſtance from each other, obſerving to water them until they have taken Root, after which they will require no farther Care, but to keep 'em clear from Weeds: the ſecond Year they will produce Flowers and Seeds, and ſome of the Sorts will periſh ſoon after, but others will abide ſeveral Years, provided they are not planted in a Soil too moiſt.

SILIQUA; Carob *or* St. John's Bread.

The *Characters* are;

It hath an apetalous Flower, having many Stamina *which grow from the Diviſions of the Flower-cup; in the Center of which riſes the Pointal, which afterwards becomes a Fruit or Pod, which is plain and fleſhy, containing ſeveral roundiſh plain Seeds.*

We have but one *Species* of this Plant in *England*, viz.

SILIQUA; *edulis. C. B. P.* The Carob-Tree, *or* St. John's-Bread, *vulgò.*

This Tree is very common in *Spain*, and in ſome Parts of *Italy*, as alſo in the *Levant*, where it grows in the Hedges, and produces a great Quantity of long, flat, brown-colour'd Pods, which are thick, mealy, and of a ſweetiſh Taſte: Theſe Pods are many times eaten by the poorer Sort of Inhabitants, when they have a Scarcity of other Food; but they are apt to looſen the Belly, and cauſe Gripings of the Bowels. Theſe Pods are directed by the *College of Phyſicians* to enter ſome medicinal Preparations, for which Purpoſe they are often brought from Abroad.

In *England* the Tree is preſerved by ſuch as delight in Exotick Plants, as a Curioſity: The Leaves do always continue green, and being different in Shape from moſt other Plants, do afford an agreeable Variety, when intermix'd with *Oranges, Myrtles*, &c. in the Green-houſe.

Theſe Plants are propagated from Seeds, which, when brought over freſh in the Pods, ſhould be ſown in the Spring upon a moderate Hot-bed, and when the Plants are come up, they ſhould be carefully tranſplanted, each into a ſeparate ſmall Pot, filled with light, rich Earth, and plunged into another moderate Hot-bed, obſerving to water and ſhade 'em until they have taken Root; after which you muſt let them have Air in proportion to the Heat of the Weather. In *June* you muſt inure them to the open Air by Degrees, and in *July* they ſhould be removed out of the Hot-bed, and placed in a warm Situation, where they may remain until the Beginning of *October*, when they ſhould be removed into the Green-houſe, placing them where they may have free Air in mild Weather, for they are pretty hardy, and do require only to be ſhelter'd from hard Froſts. When the Plants have remained in Pots three or four Years, and have gotten Strength, ſome of 'em may be turned out of the Pots in the Spring, and planted into the full Ground, in a warm Situation, where they will endure the Cold of our ordinary Winters very well, but muſt have ſome Shelter in very hard Weather.

I have not as yet ſeen any of theſe Trees produce Flowers, though from ſome which have been planted ſome Time againſt Walls, it is probable there may be Flowers and Fruit in a few Years.

SILIQUASTRUM; The Judas-Tree.

The *Characters* are;

It hath a papilionaceous Flower, whoſe Wings are placed above the Standard; the Keel is compoſed of two Petals; the Pointal which riſes in the Center of the Flower-cup, and is encompaſſed with the Stamina, *afterwards becomes a long flat Pod, containing ſeveral kidney-ſhap'd Seeds: To which may be added, roundiſh Leaves growing alternately on the Branches.*

The *Species* are;

1. SILIQUASTRUM; *Caſt. Durant.* The Judas-Tree; *vulgò.*
2. SILIQUASTRUM; *Canadenſe. Tourn.* Canada Judas-Tree.
3. SILIQUASTRUM; *quæ Ceratia agreſtis, mucronato folio, floribus parvis Caroliniana. Pluk. Alm.* Carolina Judas-Tree with pointed Leaves.

The firſt of theſe Trees is very common in the South Parts of *France*, *Italy*, and *Spain*, from whence it was formerly brought into *England*, and preſerved as a Curioſity in Green-houſes, but of late Years they have been tranſplanted into the open Air, where they thrive very well, and produce great Quantities of beautiful Flowers in the Spring, and in favourable Seaſons do perfect their Seeds extremely well.

The ſecond Sort is very common in *Virginia*, *New-England*, *Canada*, and moſt of the Northern Countries of *America*, where it is called *Red-bud*; which Name, I ſuppoſe, it receiv'd from the beautiful Colour of its Flower-buds, which when fully expanded, are of a ſoft, purple Colour. Theſe Flowers are produc'd in large Cluſters from the old Wood of the Tree; and being opened before the Green Leaves come out, they make a beautiful Appearance, eſpecially when the Trees are old and productive of Flowers; when many times the large Branches of the Tree are intirely cover'd with theſe beautiful Flowers, ſo as to afford as great Pleaſure as any ſort of flowering Tree whatever. Theſe Flowers are commonly gather'd in *America*, and put into their Sallads, to which they add a quick, poig-

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ant, agreeable Flavour; and in *England* they are by ſome curious Perſons uſed for the ſame Purpoſe.

The third Sort was brought from *Carolina*, where it grows in the Woods in great Plenty. This differs greatly in the Shape of its Leaves from the other two Sorts, and the Flowers are much ſmaller. At preſent this is leſs common in the *Engliſh* Gardens, and will not endure the Cold of our Climate ſo well, being ſubject to have the young Shoots deſtroy'd in very hard Winters; and if the Plants are young, ſometimes they will die to the Ground.

Theſe Plants may be propagated by ſowing their Seed upon a Bed of light Earth towards the latter End of *March* or the Beginning of *April* (and if you put a little hot Dung under the Bed, it will greatly facilitate the Growth of the Seeds;) when your Seeds are ſown, you ſhould ſift the Earth over them about half an Inch thick; and, if the Seaſon prove wet, it will be proper to cover the Bed with Mats, to preſerve it from great Rains, which will burſt the Seeds, and cauſe them to rot.

When the Plants are come up, they ſhould be carefully clear'd from Weeds, and in very dry Weather muſt be now and then refreſh'd with Water, which will greatly promote their Growth. The Winter following, if the Weather be very cold, it will be proper to ſhelter the Plants, by covering them either with Mats or dry Straw in hard Froſts, but they ſhould conſtantly be opened in mild Weather, otherwiſe they will grow mouldy, and decay.

About the Beginning of *April* you ſhould prepare a Spot of good freſh Ground, to tranſplant theſe out (for the beſt Seaſon to remove them is juſt before they begin to ſhoot;) then you ſhould carefully take up the Plants, being mindful not to break their Roots, and plant 'em in the freſh Ground as ſoon as poſſible, becauſe if their Roots are dried by the Air, it will greatly prejudice them.

The Diſtance theſe ſhould be planted muſt be proportionable to the Time they are to remain before they are again tranſplanted; but commonly they are planted two Feet, Row from Row, and a Foot aſunder in the Rows, which is full Room enough for them to grow two or three Years, by which Time they ſhould be tranſplanted where they are deſign'd to remain; for if they are too old when remov'd, they ſeldom ſucceed ſo well as younger Plants.

The Ground between the Plants ſhould be carefully kept clean from Weeds in Summer, and in the Spring ſhould be well dug to looſen the Earth, that their Roots may better extend themſelves every Way: You ſhould alſo at that Seaſon prune off all ſtrong ſide Branches (eſpecially if you intend to train them up for Standard Trees) that their Top Branches may not be check'd by their Side Shoots, which do often attract the greateſt Part of the Nouriſhment from the Roots; and if their Stems are crooked, you muſt place a ſtrong Stake down by the Side of each Plant, and faſten the Stem to it in ſeveral Places, ſo as to render it ſtrait, which Direction it will ſoon take as it grows larger, and thereby the Plants will be render'd beautiful.

When they have remain'd in this Nurſery three or four Years, they ſhould be tranſplanted in the Spring where they are deſign'd to remain, which may be in Wilderneſs Quarters among other flowering Trees, obſerving to place them with Trees of the ſame Growth, ſo as they may not be over-hung, which is a great Prejudice to moſt Sorts of Plants.

The uſual Height to which theſe Trees grow with us, is from twelve to twenty Feet, according to the Goodneſs of the Soil; tho' I don't remember ever to ſee any of them exceed that Growth, where they have enjoy'd the greateſt Advantages, nor do I believe the *Carolina* Sort will arrive to near that Height.

SINAPI; Muſtard.

The *Characters* are;

The Flower conſiſts of four Leaves, which are placed in Form of a Croſs, out of whoſe Flower-cup riſes the Pointal, which afterwards becomes a Fruit or Pod, divided into two Cells by an intermediate Partition, to which the Valves adhere on both Sides; and are filled with roundiſh Seeds; theſe Pods generally end in a fungous Horn, containing the like Seeds. To theſe Marks muſt be added an acrid burning Taſte peculiar to Muſtard.

The *Species* are;

1. Sinapi; *ſiliqua latiuſcula glabra, ſemine rufo, ſive vulgare. J. B.* Common *or* Red Muſtard.

2. Sinapi; *hortenſe, ſemine albo. C. B. P.* Garden *or* White Muſtard.

3. Sinapi; *Indicum, lactucæ folio. Par. Bat.* Indian Muſtard, with a Lettuce Leaf.

There are ſeveral other *Species* of this Plant, which are preſerv'd in curious Botanick Gardens for Variety; but as they are not in uſe, nor have any thing valuable to recommend 'em, I ſhall not enumerate them here.

The firſt Sort is very common in the *Iſle of Ely* in *Cambridgeſhire*, and in many other Places where the Land has been flooded with Water for many Years; but upon being drain'd, this Plant comes up in a moſt plenteous Manner, which has given Occaſion for ſome Perſons to imagine that it was produc'd ſpontaneouſly without Seeds; but the contrary of this has been fully prov'd by ſeveral learned Gentlemen, and therefore would be needleſs to repeat here; for the Reaſon why theſe Seeds do remain good for ſo many Years, when cover'd with Water, is, becauſe they abound with ſo ſharp an Oil, that it prevents the Water from pervading its Body, and being kept from the Air, is preſerv'd from Corruption.

This Sort is alſo cultivated in Gardens and Fields, in divers Parts of *England*, for the Sake of its Seeds. The Method of cultivating this Plant, is to ſow the Seeds upon an open Spot of Ground (which hath been well dug or plough'd) in the Spring, and when the Plants are come up, they ſhould be hoed, in order to deſtroy the Weeds, as alſo to cut out the Plants where they are too thick, leaving them about ten Inches aſunder (for when they are left too thick, they draw up weak, and the Seeds are never ſo large and well nouriſh'd); and if the Weeds ſhould grow again before the Plants have gotten Strength enough to bear them down, they muſt be hoed a ſecond Time; after which they will require no farther Care until the Seeds are ripe, when the Haulm ſhould be cut down, and ſpread upon the Ground to dry, and then the Seeds may be threſh'd out.

The ſecond Sort is chiefly cultivated in Gardens for a Sallad Herb in the Winter Seaſon. The Seeds of this are commonly ſown very thick in Drills, either upon a warm Border, or in very cold Weather upon a Hot-bed with *Creſſes* and other ſmall Sallad Herbs, which are commonly fit for Uſe in three Weeks or a Month from ſowing; for if they are large, they are too ſtrong to put into Sallads. In order to ſave the Seeds of this Plant, a Spot of Ground muſt be ſown with it in the Spring, which ſhould be manag'd in the ſame Manner as the former.

The third Sort may alſo be uſed in Sallads when it is very young, at which Time it has no diſagreeable Taſte; but as it grows large, ſo its Strength increaſes, and a certain Bitterneſs, which renders it very diſagreeable. This is very hardy, and when allow'd ſufficient Room, will ſpread very far, and produce large Leaves.

The Seeds of the firſt two *Species* are order'd for Medicinal Uſe, but the third Sort is ſeldom cultivated for Uſe in *England*.

SINAPISTRUM.

The *Characters* are;

The Flower conſiſts of four Leaves, which are plac'd in Form of a Croſs, but are erected; under theſe Petals are plac'd ſix Stamina, which occupy the under Part of the Flower; out of whoſe Flower-cup riſes the Pointal, which afterwards becomes a Cylindrical Pod, with two Valves, and fill'd with roundiſh Seeds.

The *Species are*;

1. Sinapistrum; *Indicum pentaphyllum, flore carneo minus non ſpinoſum. H. L.* Indian five-leav'd *Sinapiſtrum*, with a fleſh-colour'd Flower, and not prickly.

2. Sinapistrum; *Ægyptiacum, heptaphyllum, flore carneo majus ſpinoſum. H. L.* Greater prickly ſeven-leav'd *Ægyptian Sinapiſtrum*, with a Fleſh-colour'd Flower.

3 Sinapistrum; *Zeylanicum, triphyllum & pentaphyllum, viſcoſum, flore flavo. Boerh.* Three and five-leav'd viſcous *Sinapiſtrum*, from *Ceylon*, with a yellow Flower.

The firſt and ſecond Sorts are very common in *Jamaica*, *Barbados*, and other warm Countries in the *Weſt-Indies*; but the third Sort I receiv'd from Dr. *Boerhaave*, who had it from *Ceylon*, with many other curious Seeds.

Theſe Plants are preſerv'd as Curioſities, by thoſe who delight in Botanick Studies; but as they are not very beautiful, nor of any great Uſe, ſo they are rarely cultivated in other Gardens. They are all annual Plants, which periſh ſoon after their Seeds are ripe; and in *England* muſt be rais'd in a Hot-bed in the Spring, and when the Plants have acquir'd Strength, they ſhould be planted into Pots, and manag'd as hath been directed for the *Female Balſamines*, to which Article the Reader is deſir'd to turn, to avoid Repetition. In *July* theſe Plants may be plac'd in the open Air, at which Time they will flower, and in *September* their Seeds will ripen, when they ſhould be gather'd, and preſerv'd in their Pods until the Seaſon for ſowing them.

SISARUM; Skirret.

The *Characters* are;

It produces its Flowers in an Umbel, which conſiſt of ſeveral Leaves plac'd circularly, and expand in Form of a Roſe; the Empalement afterwards becomes a Fruit, compos'd of two narrow Seeds, that are gibbous and furrow'd on one Side, but plain on the other: To theſe Marks muſt be added, that the Roots are ſhap'd like long Turnips, and are join'd to one Head.

We have but one *Species* of this Plant, *viz.*

SISARUM; *Germanorum. C. B. P.* Skirrets.

This is one of the wholeſomeſt and moſt nouriſhing Roots that is cultivated in Gardens, and yet it is at preſent very rare to meet with in the Gardens near *London:* What may have been the Cauſe of its not being more commonly cultivated, I can't imagine, ſince there are many Kitchen Gardens which are proper for this Plant.

It may be propagated two Ways, *viz.* either by ſowing the Seeds, or planting the Slips: The former Method is what I would chiefly recommend, becauſe the Roots which come from Seeds are much larger than thoſe produc'd from Off-ſets, and are much tenderer. The Seaſon for ſowing the Seed is in the latter End of *February,* and upon a moiſt, rich Soil, which ſhould be well dug and looſen'd, and being laid level, the Seeds ſhould be ſown thereon, and then trod in, after the common Method of ſowing *Radiſhes,* raking the Ground over them ſmooth.

In *April* the Plants will come up, at which Time the Ground ſhould be hoed over (as is practis'd for *Carrots*) to deſtroy the Weeds, and to cut out the Plants where they are too cloſe, leaving them the firſt hoeing about three Inches aſunder; but at the ſecond hoeing, which ſhould be perform'd about a Month after the firſt, they ſhould be cut out to ſix Inches apart at leaſt, obſerving to cut down all the Weeds; and during the Summer Seaſon, the Weeds ſhould be diligently hoed down as faſt as they are produced, for if theſe Plants are ſtifled by Weeds, *&c.* they ſeldom come to good.

When their Leaves are decay'd, their Roots may be taken up for Uſe; but this ſhould be done only as they are wanted, for if they are kept long above Ground they will be good for little. The Leaves commonly decay in *October,* ſo that from that Time till the Middle of *March,* when they begin to ſhoot again, they are in Seaſon; but after they have ſhot forth green Leaves, the Roots become ſticky, and are not ſo good.

The Method of propagating this Plant from Off-ſets is as follows: About the latter End of *February* or Beginning of *March,* you ſhould dig a moiſt rich Spot of Ground, in Size proportionable to the Quantity of Plants intended; then you ſhould carefully dig up the old Roots, from which you ſhould ſlip off all the Off-ſets, preſerving their Buds on the Crown of each intire; after this you ſhould open a Drill croſs the Spot of Ground with a Spade, in a ſtrait Line, about eight or nine Inches deep, into which you ſhould place the Off-ſets, about ſix Inches apart, as upright as poſſible; then fill the Drill up again with the Earth which came out of it, and at a Foot Diſtance from the firſt make another Trench, laying the Off-ſets therein, as before, and ſo continue the Drills at a Foot Diſtance, through the whole Spot of Ground; and if the Seaſon ſhould prove very dry, it will be proper to water them until they have taken Root in the Ground; after which they will require no other Care, but to keep the Weeds conſtantly deſtroy'd as they are produc'd, in the Manner before directed for the ſeedling Plants, and when their Leaves decay, they will be fit for Uſe, as before; but after any of theſe Roots have ſeeded, they are ſticky, and good for nothing, ſo that they ſhould never be more than one Year old.

SISYMBRIUM AQUATICUM; Water Creſs.

This Plant grows in moſt Ditches and Ponds of ſtanding Water near *London*, and is gathered for Sallads in the Spring, being by many Perſons greatly eſteemed for that Purpoſe. This is rarely cultivated in Gardens, for when it is planted in the Ground, it never thrives ſo well as in Water; but whoever hath a mind to propagate it, may get ſome Plants early in the Spring, out of the Ditches, and plant 'em in a moiſt Soil, where they will thrive tolerably well.

SMALLAGE; *vide* Apium.

SMILAX; Rough Bind-weed.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves, which are plac'd circularly, and expand in Form of a Roſe, whoſe Pointal afterwards becomes a Fruit, or ſoft roundiſh Berry, containing oval-ſhap'd Seeds.

The *Species* are;

1. SMILAX; *aſpera, fructu rubente. C. B. P.* Rough Bindweed, with a red Fruit.

2. SMILAX; *viticulis, aſperis, foliis longis, anguſtis, mucronatis lævibus auriculis ad baſim rotundioribus. Pluk. Phyt.* Rough Bindweed, with long, narrow-pointed, ſmooth Leaves, having round Ears at the Baſe.

3. SMILAX; *viticulis aſperis, Virginiana, folio hederaceo levi, Zarza nobiliſſima nobis. Pluk. Phyt.* Rough Virginian Bindweed, with a ſmooth Ivy Leaf, commonly call'd *Zarzaparilla*.

There are ſeveral other *Species* of this Plant, which grow wild in *Virginia*, *Carolina*, and other Parts of *America*, in the Woods, where they climb round the Stems of Trees and Shrubs to ſupport themſelves; for their Branches are very weak and trailing, and if not ſupported, do lie upon the Ground.

Theſe Plants are preſerv'd in the Gardens of ſuch as are curious in Botany for their Variety; but there is no great Beauty or Uſe in them, ſo that they are not very commonly cultivated in other Gardens.

They are moſt of them hardy enough to endure the Cold of our Climate, if planted in a light Soil, and under the Shelter of Trees, where they delight to grow: They may be eaſily propagated by Offſets taken from the old Roots in *March*, juſt before they begin to ſhoot, and tranſplanted where they are to remain, where, if it be in a good Soil, they will flower very well, but they ſeldom produce Fruit in this Country.

But as the Seeds are often brought into *England*, ſo they may be ſown in Pots of light rich Earth, and plac'd in a ſhady Situation in Summer; but in Winter they muſt be remov'd into Shelter, obſerving always to keep the Earth moiſt, and the following Spring the Plants will come up, when the Pots ſhould be again remov'd into the Shade, and kept clear from Weeds, watering them in dry Weather; and the Spring following they may be tranſplanted where they are to remain.

SMYRNIUM; Alexanders.

The *Characters* are;

The Flowers are produc'd in Umbels, conſiſting of ſeveral Leaves, which are placed orbicularly, and expand in Form of a Roſe: Theſe reſt upon the Empalement, which afterwards becomes an almoſt globular Fruit, compos'd of two pretty thick Seeds, ſometimes ſhap'd like a Creſcent, gibbous, *and ſtreak'd on one Side, and plain on the other.*

The *Species* are;

1. Smyrnium; *Matth.* Common Alexanders.

2. Smynium; *peregrinum, rotundo folio.* C. B. P. Foreign Alexanders, with a round Leaf.

3. Smyrnium; *peregrinum, folio oblongo.* C. B. P. Foreign Alexanders, with an oblong Leaf.

4. Smyrnium; *Creticum, Paludapii foliis.* T. Cor. Candy Alexanders, with a Smallage Leaf.

The firſt of theſe Sorts (which is that order'd by the College for Medicinal Uſe) grows wild in divers Parts of *England*, and at preſent is ſeldom cultivated in Gardens; tho' formerly it was greatly uſed in the Kitchen, before *Sellery* was ſo much cultivated, which hath taken Place of *Alexanders* in moſt Peoples Opinion. The other Sorts are preſerv'd in Botanick Gardens for Variety, but may either of them be cultivated for the Uſe of the Kitchen. The ſecond Sort is much preferable to the firſt for blanching, as I have try'd, and will be tenderer, and not quite ſo ſtrong.

All theſe Plants may be propagated by ſowing their Seeds upon an open Spot of Ground in *Auguſt*, ſo ſoon as they are ripe; for if they are preſerv'd till Spring, they often miſcarry, or at leaſt do not come up until the ſecond Year; whereas thoſe ſown in Autumn, do rarely fail of coming up ſoon after *Chriſtmas*, and will make much ſtronger Plants than the other.

In the Spring theſe Plants ſhould be hoed out, ſo as to leave them ten Inches or a Foot apart each Way; and during the following Summer they muſt be conſtantly clear'd from Weeds, which if permitted to grow amongſt them, will draw them up ſlender, and render them good for little. In *February* following the Plants will ſhoot up again vigorouſly, at which Time the Earth muſt be drawn up to each Plant to blanch 'em; and in three Weeks after, they will be fit for Uſe, when they may be dug up, and the white Part preſerved, which may be ſtew'd, and eaten as *Sellery*.

SNAP-DRAGON; *vide* Antirrhinum.

SNEEZ-WORT; *vide* Ptarmica.

SNOW-DROP; *vide* Narciſſo-Leucojum.

SOLANUM; Nightſhade.

The *Characters* are;

The Flower conſiſts of one Leaf, which is divided into five Parts, and expands in Form of a Star; from the Flower-cup riſes the Pointal, which afterwards becomes a round or oval ſoft ſucculent Fruit, containing many flat Seeds in each.

The *Species* are;

1. Solanum; *officinarum, acinis nigricantibus.* C. B. P. Common Nightſhade of the Shops, with black Fruit.

2. Solanum; *officinarum, acinis puniceis.* C. B. P. Nightſhade, with red Fruit.

3. Solanum; *officinarum, acinis luteis.* C. B. P. Nightſhade, with yellow Fruit.

4. Solanum; *ſcandens, ſeu Dulcamara.* C. B. P. Perennial climbing Nightſhade, *commonly called* Bitterſweet.

5. Solanum; *ſcandens, ſeu Dulcamara, flore albo.* C. B. P. Perennial climbing Nightſhade, with a white Flower.

6. Solanum; *ſcandens, foliis variegatis.* H. R. Par. Perennial climbing Nightſhade, with variegared Leaves.

7. Solanum; *fruticoſum, bacciferum. C. B. P.* Shrubby Berry-bearing Nightſhade, *commonly call'd*, Amomum Plinii.

8. Solanum; *Guineénſe, fructu magno inſtar Ceraſi nigerrimo umbellato. Boerh Ind.* Nightſhade from Guiney, with large Fruit, reſembling Black Cherries, which grow in an Umbel.

9. Solanum; *ſpiniferum, fruteſcens, ſpinis igneis Americanum. Pluk. Phyt.* Shrubby and Thorny American Nightſhade, with Fire-colour'd Thorns.

10. Solanum; *ſpinoſum, maxime tormentoſum. Bocc. Rar. Plant.* Thorny Nightſhade, very much cover'd with a Wool or Down.

11. Solanum; *Americanum, ſpinoſum, foliis Melongenæ, fructu mammoſo. D. Lig. Tourn.* Thorny American Nightſhade, with Leaves like thoſe of Mad Apple, and a Fruit ſhap'd like an inverted Pear, *commonly call'd in Barbados* Batchelors Pear.

12. Solanum; *pomiferum, fruteſcens, Africanum, ſpinoſum nigricans flore boraginis, foliis profunde laciniatis. H. L.* Shrubby African Apple-bearing Nightſhade, with black Thorns, a Flower like Borage, and deeply jagged Leaves, *commonly call'd* Pomum Amoris.

13. Solanum; *tuberoſum, eſculentum. C. B. P.* Potatoes.

14. Solanum; *tuberoſum, eſculentum, flore albo. H. R. Par.* White Potatoes.

There are ſeveral other *Species* of this Plant, which are preſerv'd in ſome curious Botanick Gardens for Variety; but thoſe here mention'd being the moſt valuable Sorts I have obſerv'd in the *Engliſh* Gardens, I ſhall not enumerate the others.

The firſt Sort is now very common upon Dunghills, and on rich cultivated Soils in many Parts of *England*, where it often becomes a troubleſome Weed. This is the Sort which the College of Phyſicians have directed to be uſed in Medicine, under the Title of *Solanum hortenſe*. The ſecond and third Sorts are very near to the firſt, differing from it in the Colour of their Fruits, and the Plants being woolly. The eighth Sort produces much larger Fruit than either of the former, and the Plants grow proportionably larger.

All theſe Sorts are annual Plants, which may be propagated by ſowing their Seeds in *March* upon a Bed of light, rich Earth, in a warm Situation; and when the Plants come up, they ſhould be tranſplanted out into freſh Beds of rich Earth, at about ſix Inches Diſtance, obſerving to water and ſhade them until they have taken Root, as alſo to keep them clear from Weeds, and in very dry Weather they ſhould be often refreſh'd with Water: In theſe Beds they may remain until they have grown ſo large as to meet each other, when they may be taken up, with a good Ball of Earth to each Plant, and planted where they are to remain, obſerving to allow 'em at leaſt two Feet Diſtance, otherwiſe they will ſpread over each other, or any other Plants which grow near them. This Care may be taken with a few Plants of the red and yellow-berry'd and *Guiney* Sorts for the Sake of Variety, but the common Sort, if permitted to ſcatter its Seeds, will come up in Plenty without any Care.

The fourth Sort is a climbing woody Plant, which grows in the Hedges in divers Parts of *England*, and is by ſome planted in Gardens to cover Arbours or ſhady Walls in *London*, and other cloſe Places, where few other Plants will thrive. This Plant is alſo uſed in Medicine for ſome particular Preparations; but the Herb-folks in the Markets do often ſell this inſtead of the Garden *Nightſhade*, which is a cooling Plant, and this a hot, acrid one, which renders it contrary to the Intention of the Ointment, wherein *Nightſhade* is one of the Ingredients.

The Sort with white Flowers is a Variety of the former, as is alſo that with variegated Leaves, both which are preſerv'd by thoſe who are very curious in collecting the various Kinds of Plants.

Theſe may be eaſily propagated by laying down their Branches, or by planting their Cuttings in the Spring upon a moiſt Soil, where they will ſoon take Root, and may afterwards be tranſplanted where they are to remain.

The *Amomum Plinii* is propagated in great Plenty for the Beauty of its large red Fruit, which is always ripe in Winter, ſo that when the Trees have Plenty of Fruit, they make a very handſome Appearance in a Green-houſe, when intermix'd with *Orange*, *Myrtle* and other Exotick Trees.

This Plant may be propagated by ſowing its Seeds in a Pot of rich Earth in the Spring, placing it upon a moderate Hot-bed, which will greatly facilitate the Growth of the Seeds: The Earth in the Pot ſhould be frequently water'd, for if it is kept too dry the Seeds will not grow. When the Plants are come up, you ſhould make a gentle Hot-bed, which muſt be cover'd with rich Earth about ſix Inches thick; in this they ſhould be planted about ſix Inches Diſtance each Way, and the Bed arched over with Hoops, *&c.* and cover'd with Mats, to ſhade them from the Sun and Cold, obſerving frequently to water them.

When the Plants have acquir'd Strength, and the Seaſon becomes favourable, you muſt inure them to bear the open Air by Degrees, to which they ſhould be fully expos'd in *June*, when alſo they ſhould be taken up, with a Ball of Earth to the Root of each Plant, and plac'd ſeparately in Pots fill'd with rich Earth, which muſt be ſet in a ſhady Situation, and frequently water'd until they have taken Root; after which they may be remov'd into a more open Expoſure, and placed amongſt other Exotick Plants; but they do require a great Plenty of Water in dry Weather, without which they ſeldom produce much Fruit.

In Winter they muſt be remov'd into the Green-houſe, and placed in the coldeſt Part of the Houſe, where they may have as much free Air as poſſible in mild Weather, being ſo hardy as many times to endure the Cold of our ordinary Winters abroad, when planted in a warm Situation, ſo that they only require to be ſhelter'd from ſevere Froſt.

Theſe Plants ſhould be annually ſhifted about the latter End of *April*, when their Roots ſhould be pared round, cutting off all the mouldy Fibres which were next the Pot, and the Pots fill'd up with freſh, rich Earth, which will ſtrengthen their Flowers, and cauſe them to produce Plenty of Fruit, which, as I ſaid before, ripens in Winter, and being of the Shape and Size of Cherries, are commonly call'd *Winter-Cherries* by the Gardeners.

The ninth and eleventh Sorts are much tenderer than the former, being brought from the warm Parts of *America*: Theſe are alſo propagated by ſowing their Seeds in the Spring upon a good Hot-bed, and when the Plants are come up, they ſhould be each tranſplanted into a ſeparate ſmall Pot fill'd with rich Earth, and plung'd into a freſh Hot-bed, obſerving to water and ſhade them until they have taken Root; after which they ſhould have Air and Water in Proportion to the Heat of the Seaſon, and the Bed in which they are placed; and when their Roots have fill'd the Pots in which they were planted, (which they will do in a Month's Time if they thrive) they muſt be ſhaken out, and after having gently pared off the Fibres which grew next the Pot, they ſhould be placed in Pots a Size larger, which muſt be fill'd with freſh, rich Earth, and plung'd into a freſh Hot-bed to bring the Plants forward, obſerving to water them frequently, for they will not thrive without Plenty of Moiſture in warm Weather.

In *July* theſe Plants may be inur'd to bear the open Air by degrees, into which they may be remov'd if the Seaſon be warm; but otherwiſe they muſt always be preſerv'd either under Glaſſes or in the Stove; and if they are plac'd in the open Air, they ſhould not remain there longer than the Middle of *Auguſt*, leſt the Nights growing cold, ſhould hurt them: During the Winter Seaſon they muſt be preſerv'd in the Stove, obſerving to water them frequently, and the ſecond Year they will produce Flowers and Fruit.

The tenth and twelfth Sorts are not ſo tender as the laſt, but require an open airy Glaſs-Caſe, or a warm Green-houſe in Winter, but in Summer may be expos'd in the open Air with other Exotick Plants. Theſe may be propagated by ſowing their Seeds on a Hot-bed as the former, and ſhould be manag'd as hath been directed for them, with this Difference, that they may be much ſooner expos'd to the Air, and ſhould not be bred ſo tenderly. Theſe are preſerv'd for their odd Appearance, by ſuch as are curious in cultivating Exotick Plants; their Fruits being ripe in Winter, do afford a Variety in the Green-houſe, and their Leaves and Flowers being very remarkable in their Colour, Shape, *&c.* do render them worthy of a Place in every good Collection of Plants.

There is alſo another Variety which differs very much from the tenth Sort, tho' call'd by that Name in moſt of the *Engliſh* Gardens where it is preſerv'd, which I believe came from *Virginia*, and being ſomewhat like the Figure given by *Pere Boccone* of the tenth Sort, I ſuppoſe was taken for the ſame Plant; but they are very different from each other, as appear'd by ſome Plants which I rais'd from Seeds ſent me by *Signior Tilli*, Profeſſor of Botany at *Piſa*, of *Boccone's* Plant, and others rais'd from the old Sort which came from *Virginia*, both which being cultivated together, retain'd a ſpecifick Difference.

The Red and White *Potatoes* are both indifferently cultivated in *England*; tho' the red Sort is moſt commonly brought to the Markets. Theſe Plants were originally brought from *Virginia* into *Europe*, where they are at preſent ſo generally eſteem'd, as to be one of the moſt common eſculent Roots now in Uſe.

Theſe Plants are propagated by planting the ſmalleſt Roots in Spring, which, in a good Soil, will multiply exceedingly; for I have many times ſeen ten twelve or more Roots produced from a ſingle Off-ſet in one Year.

The Soil on which theſe ſhould be planted, ought to be rather moiſt than dry, and of a rich, ſoft, looſe Texture; for if the Ground be too dry or binding, they will produce but very ſmall Roots, and thoſe but ſparingly. This Soil ſhould be well dug or plough'd, and the ſmall Roots laid in Trenches or Furrows ſix Inches deep, and about ſix Inches aſunder in the Furrows; but the Furrows muſt be a Foot Diſtance from each other, for when they are too cloſe, their Roots will not be large, which is what People uſually covet.

In the Spring and Summer Months, the Weeds ſhould be carefully hoed down between the Plants, until their Haulm is ſtrong enough to bear them down, and prevent their Growth: And when their Haulm decays in Autumn, the Roots may be taken up for Uſe; which may be done as they are wanted, till the Froſt begins to ſet in; when there muſt be a Quantity taken up, and laid in Sand in a dry Cellar, where they may be protected from Froſt. The beſt of theſe may be taken out for Uſe in Winter, and the ſmall ones reſerv'd to plant in the Spring.

SONCHUS; Sowthiſtle.

Theſe are moſt of them Weeds in *England*, and are not planted in Gardens, for if their Seeds are once permitted to ſcatter upon the Ground, they will ſoon ſtock it with Plants; for which Reaſon they ſhould always be extirpated, not only thoſe in the Garden, but alſo in the Parts near it, becauſe their Seeds being furniſh'd with Down, are wafted in the Air to a conſiderable Diſtance; where falling to the Ground, they ſoon come up, and prove troubleſome.

SORBUS; The Service Tree.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves, which are plac'd orbicularly, and expand in Form of a Roſe, *whoſe Flower-cup afterwards becomes a Fruit ſhap'd like a* Pear *or* Medlar; *to which muſt be added, Pennated Leaves, like thoſe of the* Aſh.

The *Species* are;

1. Sorbus; *ſativa. C. B. P.* The manur'd Service Tree.

2. Sorbus; *ſativa, fructu pyriformi, medio rubente. H. Cath.* The manur'd Service, with Pear-ſhap'd Fruit, red in the Middle.

3. Sorbus; *ſativa, fructu ſerotino, minori, turbinato rubente. Tourn.* The leſſer late-ripe Service, with a Medlar-ſhap'd Fruit.

4. Sorbus; *aucuparea. J. B.* The wild Service, *or* Quack-beam, *by ſome call'd,* The Quicken Tree

5. Sorbus; *ſylveſtris, foliis ex luteo variegatis.* The wild Service, *or* Quick-beam, with ſtrip'd Leaves.

The manur'd *Service* was formerly ſaid to be growing wild in *England*; but this I believe was a Miſtake, for ſeveral curious Perſons have ſtrictly ſearch'd thoſe Places where it was mention'd to grow, and could not find it, nor could they learn from the Inhabitants of thoſe Countries, that any ſuch Tree had grown there.

In *Italy* theſe Trees are very common, where they have a great Variety of Sorts, which were obtain'd from Seeds; but I have not obſerv'd in the *Engliſh* Gardens more than the three Sorts here mention'd, and thoſe are yet very ſcarce, for I have not ſeen more than one large Tree of the true *Service* in *England*, which was lately growing in the Gardens formerly belonging to *John Tradeſcant* at

South Lambeth near *Vaux-Hall* in *Surrey*, who was a very curious Collector of rare Plants, in King *Charles* the *Second's* Time; which Tree was near forty Feet high, and did produce a great Quantity of Fruit annually. There are, indeed, ſome Trees of middling Growth in the Gardens of *Henry Marſh*, Eſq; at *Hammerſmith*, which produce Fruit, (from whence ſeveral young Plants have been rais'd of late in the Nurſeries near *London*); but theſe are ſmall when compar'd to that in *John Tradeſcant's* Garden.

Theſe Fruits do nearly reſemble *Medlars* in their Nature, being of a very auſtere Taſte till they are rotten, when they have a more agreeable Flavour; but in *England* their Fruit does not ripen ſo well as in warmer Countries, and is therefore leſs eſteem'd: However, the Trees are propagated by ſuch Perſons as are curious in collecting the various Kinds of hardy Trees and Shrubs, for the Oddneſs of their Leaves and Fruit.

They may be propagated by ſowing their Seeds on a moderate Hot-bed in the Spring; and when the Plants are come up, they ſhould be carefully kept clear from Weeds, and in dry Weather water'd; but they ſhould be expoſ'd to the open Air: For the only Reaſon for making a Hot-bed, is, to forward the Growth of the Seeds; but if when the Plants are come up, the Bed is cover'd, it will draw the Plants, and ſpoil them. In this Bed the Plants ſhould remain until the Middle of *March* the ſucceeding Spring, when there ſhould be a warm, light Spot of Ground prepar'd to receive them; into which they ſhould be planted in Rows two Feet aſunder, and a Foot diſtant in the Rows; obſerving to take them up carefully, and to plant them as ſoon as poſſible that their Roots may not dry.

During the Summer, the Ground ſhould be kept conſtantly clear from Weeds, and in Winter there ſhould be a little Mulch laid upon the Surface of the Ground about their Roots, to protect them from being injur'd by Froſt; but in the Spring the Ground between 'em ſhould be dug, burying the Mulch therein: In doing of which, you muſt be careful not to cut or injure the Roots of the Plants.

In this Nurſery they may continue three or four Years, according to their Growth, when it will be proper to tranſplant them out where they are to remain. The beſt Seaſon for which is in *March*, juſt before they begin to ſhoot: The Soil ſhould be warm in which they are planted, and the Situation defended from cold Winds: In which Place they will thrive and produce Fruit in a few Years; but as the Fruit will vary from thoſe which the Seeds were taken from, (as is the Caſe of moſt Sorts of Fruit) ſo the ſureſt Method to have the particular Sorts which you intend to cultivate, is to bud or graft them either upon their own or the wild *Service* Stock; upon which they will take and produce Fruit in a few Years.

The wild *Service* or *Quick-beam* grows wild in divers Parts of *England*, but it is often cultivated in Gardens for Variety. This produces large Bunches of Flowers at the Extremity of its Branches in *May*, which are ſucceeded by large roundiſh Fruit, which change to a beautiful Scarlet Colour in Autumn, when they afford an agreeable Variety in Wilderneſs Quarters.

This Tree ſeldom grows above twenty Feet high, ſo ſhould be always plac'd in Lines of Trees of the ſame Growth.

The Wood of this Tree is much commended by the *Wheelwright* for being all Heart, and it is of great Uſe for *Husbandmens* Tools, Goads, *&c.* The Flowers of this Tree ſmell very ſweet, and the Fruit is extraordinary Food for *Thruſhes*; ſo that where theſe Trees are planted, they will greatly frequent.

The Sort with variegated Leaves is preſerved by ſuch as are curious in collecting the ſeveral Sorts of ſtrip'd Plants, but there is no great Beauty in it. This may be propagated by Layers, or by being budded on the plain Sort, but they will become plain again, if planted on a very rich Soil.

Theſe Trees ſhould have a moiſt, ſtrong Soil, but will grow in the moſt expos'd Places, being extreme hardy, which renders them worthy of Care, ſince they will thrive where few other Trees will ſucceed.

SORREL; *vide* Acetoſa.

SOUTHERNWOOD; *vide* Abrotanum.

SOWBREAD; *vide* Cyclamen.

SPARTIUM; The Broom-Tree.

The *Characters* are;

It hath a papilionaceous Flower, whoſe Pointal, which riſes from the Flower-cup, afterwards becomes a ſhort, roundiſh, ſwelling Pod, containing, for the moſt Part, one Kidney-ſhap'd Seed in each.

The *Species* are;

1. Spartium; *alterum, monoſpermum, ſemine reni ſimile.* C. B. P. Another Spaniſh Broom, with Pods containing one Kidney-ſhap'd Seed.

2. Spartium; *tertium flore albo.* C. B. P. The white Spaniſh Broom.

Theſe Plants are propagated by ſowing their Seeds upon a moderate Hot-bed in the Spring; and when they are come up, they muſt be each planted in a ſeparate ſmall Pot, fill'd with freſh, light Earth, and plung'd into a freſh Hot-bed, obſerving to water and ſhade them until they have taken Root; after which they muſt have a good Share of free Air, by raiſing the Glaſſes when the Weather is favourable; and when the Plants begin to have Strength, they muſt be inur'd to the open Air by Degrees: Into which they ſhould be remov'd in *July*, placing them in a warm Situation, and during the Summer Seaſon, they muſt be frequently water'd; and the Beginning of *October* they muſt be remov'd into the Green-houſe, placing them where they may have Air and Sun, and as the Earth of the Pots dries, they muſt be refreſh'd with Water.

The Spring following they ſhould be ſhaken out of the ſmall Pots, and put into others a Size larger, filling them up with freſh, light Earth; and as the Seaſon advances, ſo they muſt be inur'd to the open Air again; and in *May* they ſhould be carry'd abroad, and plac'd amongſt other Exotick Plants, where they will add to the Variety.

While theſe Plants are young, they are ſomewhat tender; but when they are woody, they will endure a greater Degree of Cold; and if planted in a very warm Situation, will endure the Cold of our ordinary Winters in the open Air.

The Flowers of theſe Plants are ſmall, and generally produc'd thinly upon the Branches, ſo that they do not make a very great Appearance; however, for Variety, they may have a Place in every good Collection of Plants. The Sort with white Flowers will often produce ripe Seeds in *England*, when the Summer is warm; but the Seeds of both Sorts may eaſily be obtain'd from *Spain* or *Portugal*, where they grow wild in great Plenty.

SPINA ALBA; *vide* Meſpilus.

SPINACHIA; Spinach *or* Spinage.

The *Characters* are;

It hath an apetalous Flower, conſiſting of many Stamina *included in the Flower-cup, which are produc'd in Spikes upon the Male Plants which are barren; but the* Embryo's *are produc'd from the Wings of the Leaves on the Female Plants, which afterwards become a roundiſh or angular Seed, which in ſome Sorts have Thorns adhering to them.*

The *Species* are;

1. Spinachia; *vulgaris, capſulâ ſeminis aculeatâ. Tourn.* The common prickly *or* narrow-leav'd *Spinach.*

2. Spinachia; *vulgaris capſulâ ſeminis non aculeatâ. Tourn.* Common ſmooth-ſeeded *Spinach*, with broader Leaves.

3. Spinachia; *vulgaris capſulâ ſeminis non aculeatâ, folio maximo rotundo. Spinach*, with ſmooth Seeds, and a very large round Leaf.

The firſt of theſe Sorts is commonly cultivated in Gardens for Winter Uſe, it being much hardier than any of the other Sorts.

The Seeds of this Kind ſhould be ſown upon an open Spot of Ground towards the latter End of *July*, obſerving, if poſſible, to do it when there is an Appearance of Rain; for if the Seaſon ſhould prove dry for a long time after the Seed is ſown, the Plants will not come up regularly, and many times there will not be half a Crop. When the *Spinach* is come up, the Ground ſhould be hoed to deſtroy the Weeds, and alſo to cut up the Plants where they are too cloſe, leaving the remaining Plants about four or five Inches aſunder: But this ſhould always be done in dry Weather, that the Weeds may be deſtroy'd after they are cut.

About a Month or five Weeks after the firſt Hoeing, the Weeds will begin to grow again, therefore the Ground ſhould be then hoed again the ſecond Time, obſerving, as before, to do it in dry Weather: But if the Seaſon ſhould prove moiſt, it will be proper to gather the Weeds up after they are cut, and carry 'em off the Ground; for if the *Spinach* is not clean'd before Winter from Weeds, they will grow up, and ſtifle it ſo that in wet Weather the *Spinach* will rot away.

In *October* the *Spinach* will be fit for Uſe, when you ſhould only crop off the largeſt Leaves, leaving thoſe in the Center of the Plants to grow bigger; and thus you may continue cropping it all the Winter and Spring, until the young *Spinach*, ſowed in the Spring, is large enough for Uſe, which is commonly in *April*; at which time the Spring advancing, the Winter *Spinach* will run up to Seed, ſo that you ſhould cut it up, leaving only a ſmall Parcel to produce Seeds.

But the Ground in which this Winter *Spinach* is ſown, being commonly planted with early *Cabbages*, it is not proper to let any of the *Spinach* remain there for Seed, but it ſhould be cleared off as ſoon as ever the *Spinach* is fit for Uſe, that the *Cabbages* may be earth'd up, and laid clear, which is of great Service to them; therefore you ſhould ſow a ſmall Spot of Ground with this ſort of *Spinach* on Purpoſe to ſtand for Seed, where there ſhould be no other Plants among it.

The two Sorts with ſmooth Seeds do produce much larger and thicker round Leaves than the former, but being ſomewhat tenderer, are always ſown in the Spring, eſpecially the third Sort, which is preferable to either of the former for Summer Uſe.

Theſe are either ſown upon an open Spot of Ground by themſelves, or elſe mix'd with *Radiſh-ſeed*, as is the common Practice of the *London* Gardeners, who always endeavour to have as many Crops from their Land in a Seaſon as poſſible: But, where Land is cheap in the Country, it will be the better Method to ſow it alone without any other ſort of Seed mix'd with it; and when the Plants are come up, the Ground ſhould be hoed to deſtroy the Weeds, and cut out the Plants where they are too cloſe, leaving the remaining about three Inches aſunder; and when they are grown ſo large as to meet, you may then cut out a Part of it to uſe, thinning them, that they may have Room to ſpread; and this Thinning may be twice perform'd, as there is Occaſion for the *Spinach*, at the laſt of which the Roots ſhould be left eight or ten Inches aſunder; and if then you hoe the Ground over again, to deſtroy the Weeds, it will be of great Service to the *Spinach*; for if the Land is good upon which it was ſown, the third Sort, with this Management, will many times produce Leaves as large as the *Broad-leav'd Dock*, and be extremely fine.

But in order to have a Succeſſion of *Spinach* through the Seaſon, it will be proper to ſow the Seed at three different Times in the Spring; the firſt early in *January*, which muſt be on a dry Soil; the ſecond the Beginning of *February*; upon a moiſter Soil; and the third the Beginning of *March*, which ſhould be on a very moiſt Soil; and this third Sowing ſhould be hoed out thinner the firſt Time of hoeing it, than either of the former Sowings; for there will be no Neceſſity to leave it for cutting out thin for uſe, becauſe the former Sowings will be ſufficient to ſupply the Table 'till this third Sowing is full grown; beſides, by leaving it thin at firſt, it will not be apt to run up to Seed ſo ſoon as it would if the Plants were cloſe.

In order to ſave Seed of either of theſe Kinds, you ſhould ſow an open rich Spot of Ground, with the Sort you intend, in *February*, after the Danger of being injur'd by Froſt is over; and when the Plants are come up, they ſhould be hoed out to ſix or eight Inches Diſtance, obſerving to cut down the Weeds at the ſame Time; and when the Plants have grown about three Weeks or a Month longer, they ſhould be hoed a ſecond Time, when they ſhould be left twelve or fourteen Inches aſunder at leaſt; for when they have ſhot out their Side-Branches, they will ſufficiently ſpread over the Ground.

You muſt alſo obſerve to keep 'em clear from Weeds, which if ſuffer'd to grow amongſt the *Spinach*, will cauſe it to run up weak, and greatly injure it. When the Plants have run up to Flower, you will eaſily perceive two Sorts amongſt them, *viz.* *Male* and *Female*; the *Male* will produce Spikes of ſtamineous Flowers, which contain the *Farina*, and are abſolutely neceſſary to impregnate the Embryo's of the *Female* Plants, in order to render the Seeds prolifick. Theſe *Male* Plants are by the Gardeners commonly called *She Spinach*, and are often by the Ignorant pulled up as ſoon as they can be diſtinguiſhed from the *Female*, in order, as they pretend, to give Room for the Seed-bearing to ſpread; but from ſeveral Experiments which I made on theſe Plants, I find, where-ever the *Male* Plants are entirely removed before the *Farina* is ſhed over the *Female* Plants, the Seed will not grow which they produce, ſo that it is abſolutely neceſſary to leave a few of them in every Part of the Spot; though there may be a great many drawn out where they are too thick; for a ſmall Quantity of *Male* Plants (if rightly ſituated) will be ſufficient to impregnate a great Number of *Female*, becauſe they greatly abound with the *Farina*, which, when ripe, will ſpread to a conſiderable Diſtance, when the Plants are ſhaken by the Wind.

SPIRÆA FRUTEX; Spiræa Frutex; *vulgô*

The *Characters* are;

The Flower is compoſed of many Leaves, which are plac'd in a circular Order, and expand in Form of a Roſe; out of whoſe Flower-cup riſes the Pointal, which afterwards becomes a Fruit compoſed of ſeveral Pods, in which are contain'd ſeveral oblong Seeds.

The *Species* are;

1. SPIRÆA; *ſalicis folio. Tourn.* Spiræa Frutex; *vulgô.*

2. SPIRÆA; *opuli folio. Tourn.* Spiræa with a Marſh-Elder Leaf, *commonly called*, Virginian Gelder-Roſe with a Currant Leaf.

3. SPIRÆA; *Hyperici folio non crenato. Tourn.* Hypericum Frutex; *vulgô.*

4. SPIRÆA; *Africana, odorata, foliis piloſis. Com. Rar.* Sweet-ſcented African Spiræa with hairy Leaves.

The firſt of theſe Shrubs is very common in the Nurſeries near *London*, where it is ſold with other flowering Shrubs at a certain Price by the Hundred. This Shrub ſeldom riſes above five Feet high, ſo is proper to intermix with other Shrubs of the ſame Growth, in ſmall Wilderneſs Quarters, and other Plantations of flowering Trees.

This Plant may be propagated from Suckers, which are ſent forth in Plenty from the Stems of the old Plants, or by laying down the tender Branches, which, when rooted, ſhould be tranſplanted out in Rows at three Feet diſtance, and the Plants a Foot aſunder in the Rows: In this Nurſery they may remain two Years, obſerving to keep the Ground clear from Weeds, and in the Spring to dig up the Ground between the Rows, ſo that their Roots may the more eaſily extend themſelves; and if they ſhoot out many Side-branches, they ſhould be prun'd off, ſo as to reduce the Shrubs to a regular Figure, and afterwards they may be tranſplanted where they are to remain, either in ſmall Wilderneſs Quarters, or in Clumps of flowering Shrubs, obſerving to place them amongſt other Sorts of equal Growth.

The ſecond Sort is not quite ſo common in *England* as the former. This was originally brought from *America*, but it being full as hardy as the former, and increaſing as faſt by Suckers, it may ſoon be obtain'd in Plenty. This is nearly of the ſame Growth with the former, and may be intermixed therewith in Wilderneſs Quarters, to add to the Variety; it may be propagated and manag'd in the ſame Manner as the former.

The third Sort is very common in the Nurſeries near *London*, where it is generally known by the Name of *Hypericum Frutex*, and is ſold amongſt other flowering Shrubs at a common Rate. This may be propagated by laying down the under Branches, which will take Root in the Compaſs of one Year, when they may be taken off. and planted in a Nurſery for two or three Years (as hath been directed for the former) after which they may be tranſplanted out where they are deſign'd to remain, placing 'em with the two former, being nearly of the ſame Growth, where they will add to the Variety.

The two firſt Sorts do produce their Flowers at the Extremity of their Shoots, the firſt in a long Spike, and the ſecond in Form of an Umbel; but the third Sort produces its Flowers at the Joints of the former Year's Wood, in Bunches, ſo that the whole Tree ſeems covered with white Flowers, when they are blown. They all three produce their Flowers in *May*, and ſometimes continue in Beauty 'till *June*, in a cool Seaſon, for which they are eſteemed by the Curious.

Theſe Shrubs do require no other Pruning but to cut out all the dead Branches, and ſuch as grow irregular, and take off all their Suckers every Year, for if theſe are permitted to grow, they will ſtarve the old Plants, by drawing away their Nouriſhment. The Ground between 'em ſhould alſo be dug every Spring, to encourage their Roots, and every third Year a little rotten Dung buried therein, which will cauſe 'em to flower very ſtrong.

The fourth Sort is a Native of the *Cape of Good Hope*, where the Inhabitants call it *Buchu*, and eſteem it extremely for many medicinal Purpoſes, but particularly for expelling the Venom of Snakes.

This Plant is at preſent very rare in *England*, and I believe in moſt Parts of *Europe*, though formerly it was growing in ſeveral curious Gardens in *Holland*, but hath been loſt in that Country for ſome Time, 'till two Years ago it was retrieved again from the *Cape of Good Hope*, by Mr. *George Clifford* of *Amſterdam*, a Gentleman who is extremely curious in Botany and Gardening, from whom I was furniſh'd with it.

This Plant is propagated from Seeds, which ſhould be ſown upon a moderate Hot-bed in the Spring, and when the Plants are come up, they muſt be tranſplanted each into a ſeparate ſmall Pot, fill'd with light, freſh Earth, and plung'd into a freſh Hot-bed, obſerving to water 'em and ſhade the Glaſſes in the Heat of the Day, until they have taken Root; after which they ſhould have Air in proportion to the Heat of the Weather, and the Bed in which they are placed. In *June* they ſhould be inured to the open Air by Degrees, and the Beginning of *July* they ſhould be remov'd out of the Hot-bed, and placed in a warm Situation, where they may remain until the End of *September*; at which Time they muſt be removed into the Greenhouſe, placing 'em in a warm Part, but not too cloſe under other Plants. During the Winter Seaſon they muſt be now and then gently refreſh'd with Water, but they ſhould not have it given them in large Quantities at that Seaſon; but in the Summer they do require to be water'd more plentifully; and at leaſt once a Year they muſt be ſhifted into other Pots of a larger Size, as the Plants advance their Growth, giving 'em freſh Earth, which ſhould be light and rich.

This Plant produces its Flowers near the extream Parts of the Branches, which altho' not very beautiful, yet for the ſingular Appearance of the hairy Leaves, which adds to the Variety of exotick Plants in the Green-houſe, it deſerves a Place in every curious Garden, eſpecially as it requires no artificial Heat in Winter.

SQUASHES; *vide* Melo-pepo.

SQUILS; *vide* Scilla.

STACHYS; Baſe-Horehound.

The *Characters* are;

It hath a labiated Flower conſiſting of one Leaf, whoſe Upper-lip is ſomewhat arch'd and erect, and the Under lip is cut into three Segments, the middle one being larger than the other two; out of the Flower-cup riſes the Pointal, attended by four Embryo's, which afterwards become ſo many Seeds, which are roundiſh, and incloſ'd in a Husk, which before was the Flower-cup: To theſe Marks may be added, downy, hoary Leaves.

The *Species* are;

1. Stachys; *major. Germanica. C. B. P.* Greater German Baſe-Horehound.

2. Stachys; *Cretica. C. B. P.* Baſe-Horehound of Candia.

3. Stachys; *Cretica, latifolia. C. B. P.* Broad-leav'd Baſe-Horehound of Candia.

4. Stachys; *minor, Italica. C. B. P.* Leſſer Italian Baſe-Horehound.

5. Stachys; *Canarienſis, truteſcens, verbaſci folio. Tourn.* Canary ſhrubby Baſe-Horehound, with a Mullein Leaf.

There are ſeveral other *Species* of this Plant which are preſerv'd in ſome curious Botanick Gardens for Variety; but as they have little Beauty or Uſe, I ſhall not enumerate them here.

The four Sorts firſt mentioned do ſeldom abide longer than two or three Years; for after they have produced Flowers and Seeds, the old Roots are very apt to decay, unleſs part of their Flower-ſtems are taken off early in the Summer, which will cauſe them to break out again at Bottom, whereby the Roots may be preſerved.

They are all propagated by Seeds, which ſhould be ſown in *March*, upon a Bed of light, freſh Earth, and when the Plants are come up, they may be planted out into other Beds about ſix Inches aſunder, obſerving to water 'em until they have taken Root, after which they will require no farther Care, but to keep 'em clear from Weeds, 'till *Michaelmas*, when they ſhould be tranſplanted where they are to remain, which muſt be in an open Situation, and upon a dry, light Soil, not too rich, in which they will endure the Winter much better than in a rich, ſtrong Soil. The Summer following theſe Plants will flower, and in *Auguſt* their Seeds will ripen, when they may be gathered and preſerv'd 'till Spring for ſowing.

The fifth Sort is a ſhrubby Plant, which with us riſes to be ſix or ſeven Feet high; this is propagated by ſowing the Seeds upon a Bed of light, freſh Earth (as the former) and when the Plants are come up, they muſt be tranſplanted into Pots fill'd with freſh, light, ſandy Soil, placing 'em in a ſhady

Situation until they have taken Root, after which they may be removed into a more open Expoſure; but in dry Weather muſt be frequently water'd: In this Place they may remain until the Middle or latter End of *October*, when they muſt be removed into the Green-houſe, placing them in the cooleſt part, where they may have as much free Air as poſſible, and muſt be often water'd, otherwiſe they will ſoon decay.

In Summer Time theſe Plants will require to be ſhifted twice, adding freſh Earth to their Roots; and if they are only ſhelter'd from hard Froſt in Winter, it will be ſufficient, for they are very hardy. The ſecond Year after ſowing, they will produce Flowers and Seeds, and will continue ſo to do every Year after; and although their Flower has no great Beauty, yet, for the Variety of its large, ſoft, woolly Leaves, it deſerves a Place amongſt other exotick Plants.

STAPHYLODENDRON; Bladder-nut.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves, which are placed circularly, and expand in Form of a Roſe; out of whoſe many-leav'd Flower-cup riſes the Pointal, which afterwards becomes a membraneous Fruit, ſomewhat like the inflated Bladder of Fiſhes, and divided into two or three Cells, containing Seeds in Form of a Skull.

The *Species* are;

1. STAPHYLODENDRON; *ſylveſtre & vulgare. H. L.* The common wild Bladder-nut.

2. STAPHYLODENDRON; *Virginanum trifoliatum. H. L.* Three-leav'd Virginian Bladder-nut.

3. STAPHYLODENDRON; *Africanum, folio ſingulari, lucido. Par. Bat.* African Bladder-nut with ſingle ſhining Leaves.

The firſt of theſe Trees is found wild in the Woods and other ſhady Places near *Pontefract* in *Yorkſhire*, and in ſome other Northern Parts of *England*; but near *London* it is preſerved in the Gardens of thoſe who are curious in collecting the various Kinds of hardy Trees.

The ſecond Sort is a Native of *America*, but is ſo hardy as to endure the ſevereſt Cold of our Climate in the open Air, and produces Flowers and Fruit as plentifully in *England* as the common wild Sort.

Both theſe Kinds may be propagated by ſowing their Seeds early in the Spring, in Beds of light, freſh Earth, and when the Plants are come up, they muſt be carefully kept clear from Weeds, and in very dry Weather if they are now and then refreſh'd with Water, it will greatly promote their Growth; in theſe Beds they may remain until *March* following, at which Time they ſhould be carefully taken up and planted in a Nurſery, placing 'em in Rows three Feet aſunder, and the Plants eighteen Inches diſtance in the Rows; obſerving to lay a little Mulch upon the Surface of the Ground about their Roots, to prevent the Sun and Wind from penetrating the Ground to dry them, and if the Spring ſhould prove very dry, it will be convenient to give 'em a little Water, to encourage their taking Root; after which they will require no farther Care, but to keep the Ground clear from Weeds in Summer, and every Spring to prune off irregular Branches, and dig the Ground between the Rows, to looſen the Earth, that their Roots may the more eaſily extend. In this Nurſery they may remain two or three Years, by which Time it will be proper to tranſplant them out where they are to remain, either in Wilderneſs Quarters, or in Clumps of various Trees, where they will add to the Diverſity. The beſt Seaſon for tranſplanting theſe Trees is in the Spring, juſt before they begin to ſhoot, though they may be tranſplanted in *October* and *November*, as is practis'd for other deciduous Trees.

Theſe do commonly grow in *England* to the Height of twelve or fourteen Feet, ſo ſhould be plac'd with other Trees of the ſame Growth.

They may alſo be propagated by laying down their tender Branches, which will take Root in the Compaſs of one Year, and may afterwards be taken off and tranſplanted, as hath been directed for the *Seedling* Plants.

The *African* Sort does not produce Seeds in this Country, as I could ever obſerve; ſo is only propagated by laying down the tender Branches in the Spring, obſerving to notch 'em at a Joint, as is practis'd in laying down Carnations. Theſe, if duly water'd in dry Weather, will take Root in the Compaſs of one Year, and may the ſucceeding Spring be taken off, and tranſplanted into Pots, fill'd with light, freſh, rich Earth, and placed in a ſhady Part of the Green houſe, until they have taken Root, and in *May* they ſhould be carried into the open Air, placing 'em amongſt other exotick Plants, in a warm Situation. During the Summer Seaſon they muſt be frequently watered, and when their Roots have fill'd the Pots, they ſhould be remov'd into larger, obſerving always in ſhifting theſe Plants, to pare off the Earth and Fibres on the Outſide of the Ball, before they are placed into the other Pots, which muſt alſo be filled up with the ſame light rich Earth as before directed. In Winter they muſt be houſed with *Oranges*, *Myrtles*, *&c.* being too tender to endure the Cold of our Climate in the open Air, but do require no artificial Warmth in Winter; and though the Flowers of this Tree (which it often produces in *England*) are not very beautiful, yet as it retains its Leaves all the Winter, which have a very ſhining Appearance, when the Trees are train'd up to regular Heads, it adds greatly to the Beauty of a Greenhouſe, when intermix'd with exotick Plants, and deſerves a Place in every good Collection.

STAR-WORT; *vide* After.

STAR-FLOWER; *vide* Ornithogalum.

STATICE; Thrift, *or* Sea Pink.

The *Characters* are;

It is a Plant with a Flower gathered into an almoſt ſpherical Head, furniſh'd with a common ſcaly Empalement. This Head is compoſed of ſeveral Clove-Gilly-flower Flowers, conſiſting of ſeveral Leaves in a proper Empalement, ſhap'd like a Funnel. In like manner the Pointal riſes out of the ſame Empalement, and afterwards turns to an oblong Seed, wrapt up in the Empalement as in a Husk.

The *Species* are;

1. STATICE; *Lugd.* Thrift, Sea-Gilliflower, *or* Sea-Cuſhion.

2. STATICE; *montana, minor, Tourn.* Leſſer Mountain Thrift, *or* Sea-Gilliflower.

3. STATICE; *foliis anguſtioribus, flore rubro. Boerh. Ind.* Narrow-leav'd Thrift, with red Flowers.

4. STATICE; *foliis anguſtioribus, flore albo. Boerh. Ind.* Narrow-leav'd Thrift, with a white Flower.

5. Statice; *Luſitanica, fruticoſa maritima, magno flore. Tourn.* Shrubby Portugal Sea Thrift, with a large Flower.

The firſt of theſe Plants grows wild in *Germany*, and ſome other Inland Countries in great Plenty, from whence it hath been brought into *England*; but the ſecond Sort is found wild in great Plenty in the Salt Marſhes near the Sea, in divers Parts of *England*.

The third and fourth Sorts have been brought into *England* from the *Alps*, or ſome other mountainous Parts, and are preſerv'd for the Beauty of their Flowers in ſome old Gardens.

The fifth Sort is leſs common in *England* than either of the former Sorts, and is only to be found in the Gardens of ſuch as are curious in collecting rare Plants.

The firſt four Sorts have been promiſcuouſly planted in Gardens, to make Edgings on the Sides of Borders in the Flower-Gardens, for which Purpoſe they were formerly in great Eſteem, but of late they have been very juſtly rejected for that Uſe, becauſe there was a Neceſſity of tranſplanting theſe Edgings every Year, otherwiſe they could not be kept within due Bounds; beſides, where-ever a Plant fail'd, which was no extraordinary thing, there always appear'd a large unſightly Gap. However, though they are not in Uſe at preſent for that Purpoſe, yet a few Plants of the firſt, third, fourth, and fifth Sorts ſhould have a Place in ſome Part of the Flower-Garden, for Variety, eſpecially the third and fourth, which are extreme hardy Plants, and will grow in almoſt any Soil or Situation, and their Flowers will continue a long Time in Beauty.

All theſe Sorts may be propagated by parting their Roots, the beſt Time for which is in Autumn, that they may take Root before the Froſt, which will cauſe 'em to flower much ſtronger than thoſe tranſplanted in the Spring, and the Plants will not be in ſo much Danger of miſcarrying as thoſe are, eſpecially when the Spring happens to prove dry. After theſe Plants have taken Root, they will require no farther Care, but to keep them clear from Weeds, and the *May* following they will begin to flower, which will continue in Beauty three Weeks or a Month, provided the Seaſon be not too hot and dry.

The *Portugal* Sort is not ſo hardy as either of the former, tho' it will endure the Cold of our ordinary Winters very well in the open Air, provided it is planted in a dry Soil and a warm Situation, but in very ſevere Froſts it is often deſtroy'd. This may alſo be propagated by Cuttings or Slips, which ſhould be planted in a Bed of freſh Earth in the Spring, and water'd and ſhaded until they have taken Root; after which they muſt be kept clear from Weeds till *Michaelmas*, when they ſhould be planted either in Pots to be ſhelter'd in Winter, or in ſome warm Situation in the full Ground, where they may remain to flower.

This Plant will grow two or three Feet high, and become ſhrubby, provided it be not injur'd by Cold.

STOCK-GILLY-FLOWER; *vide* Leucojum.

STOECHAS; Caſſidony, *French* Lavender, *or* Stickadore.

The *Characters* are;

It hath a labiated Flower, conſiſting of one Leaf, whoſe upper Lip is upright, and cut in two, but the under Lip (or Beard) is cut into three Parts; but both are ſo divided *as at firſt to appear like a Flower cut into five Segments; out of whoſe Flower-cup riſes the Pointal, attended by four Embryo's, which afterwards becomes ſo many roundiſh Seeds incloſed in the Flower-cup. To theſe Marks muſt be added, that the Flowers are ranged in a various Series into ſcaly Heads, out of the Top of which peep ſome ſmall Leaves, which look very beautifully.*

The *Species* are;

1 Stoechas; *purpurea. C. B. P.* Purple *Stœchas* or Caſſidony, *commonly call'd,* Arabian *Stœchas.*

2. Stoechas; *folio ſerrato. C. B. P.* Caſſidony, *or* French Lavender, with a ſerrated Leaf.

3. Stoechas; *cauliculis non foliatis. C. B. P.* Caſſidony, *or* French Lavender, with long naked Flower-ſtalks.

The Heads of Flowers of the firſt Kind are uſed in ſome of the capital Medicines directed by the College of Phyſicians, which are commonly brought from the *South* Parts of *France,* where the Plants are in great Plenty; but theſe are very apt to take a Mouldineſs in their Paſſage, and ſo are not near ſo good for uſe as thoſe which are gather'd freſh in *England,* where the Plants may be cultivated to great Advantage.

The ſecond and third Sorts are preſerv'd in many curious Gardens for Variety, but they are not of any uſe.

All theſe Plants may be cultivated by ſowing their Seeds upon a Bed of light, dry Soil in *March*; and when the Plants are come up, they ſhould be carefully clear'd from Weeds until they are two Inches high, at which Time they ſhould be remov'd; therefore there muſt be a Spot of light, dry Ground prepar'd, and laid level, which muſt be trodden out in Beds, into which the Plants ſhould be planted at about five or ſix Inches Diſtance each Way, obſerving to water and ſhade them until they have take Root, after which they will require no further Care, but to keep them clear from Weeds the following Summer; but if the Winter ſhould prove very ſevere, it will be proper to cover them with Mats, *Peaſe-haulm,* or ſome other light Covering to guard them againſt the Froſt, which otherwiſe would be apt to injure them while they are ſo young: But in *March,* or the Beginning of *April,* the following Spring, they muſt be remov'd into the Places where they are to remain, obſerving, if poſſible, to tranſplant them in a warm moiſt Seaſon, and not to let them remain long above Ground, for if their Roots are dry'd, they ſeldom grow well after. The Soil in which theſe are planted ſhould be a dry, warm Sand or Gravel, and the poorer the Soil is in which they are planted, the better they will endure the Cold of the Winter, provided the Ground be dry; tho' indeed the Plants will thrive better in Summer upon a rich, moiſt Ground; but then they will not produce ſo many Flowers, nor will the Plant afford near ſo ſtrong an aromatick Scent; as is the Caſe with moſt Sorts of aromatick Plants.

Theſe Plants may alſo be propagated by planting Slips or Cuttings of any of the Kinds in the Spring, obſerving to refreſh them with Water until they have taken Root, after which they may be manag'd as hath been directed for the ſeedling Plants; but as thoſe Plants raiſed from Seeds are much better than theſe, it is hardly worth while to propagate them this way, eſpecially ſince their Seeds do ripen ſo well in this Country.

The Heads of the firſt Sorts may be gather'd for uſe when the Flowers are in full Perfection, and ſpread to dry in a ſhady Place, after which they may be put up for uſe.

STONECROP; *vide* Sedum.

STOVES are Contrivances for the preſerving ſuch tender Exotick Plants, which will not live in theſe Northern Countries without artificial Warmth in Winter. Theſe are built in different Methods, according to the Ingenuity of the Artiſt, or the different Purpoſes for which they are intended; but in *England* they are at preſent reducible to two.

The firſt is call'd a *Dry Stove*, being ſo contriv'd, that the Flues thro' which the Smoak paſſes are either carry'd under the Pavement of the Floor, or elſe are erected in the Back-part of the Houſe, over each other, like Steps: In theſe *Stoves* the Plants are placed on Shelves of Boards laid on a Scaffold above each other, for the greater Advantage of their ſtanding in Sight, and enjoying an equal Share of Light and Air. In theſe *Stoves* are commonly placed the tender Sorts of *Aloes*, *Cerus's*, *Euphorbiums*, *Tithymals*, and other ſucculent Plants, which are impatient of Moiſture in Winter, and therefore require to be kept in a ſeparate *Stove*, and not placed among Trees or herbaceous Plants, which perſpire freely, and thereby often cauſe a damp Air in the Houſe, which is often imbib'd by the ſucculent Plants to their no ſmall Prejudice. Theſe *Stoves* may be regulated by a *Thermometer*, ſo as not to over-heat them, nor to let the Plants ſuffer by Cold; in order to which, all ſuch Plants as require nearly the ſame Degree of Heat ſhould be placed by themſelves in a ſeparate Houſe; for if in the ſame *Stove* there are Plants placed of many different Countries, which require as many different Heats, by making the Houſe warm enough for ſome Plants, others by having too much Heat, are drawn and ſpoil'd.

The other Sort of *Stoves* are commonly call'd *Bark-Stoves*. to diſtinguiſh them from the *Dry-Stoves* already mention'd. Theſe have a large Pit, nearly the Length of the Houſe, three Feet deep, and ſix or ſeven Feet wide, according to the Breadth of the Houſe; which Pit is fill'd with freſh *Tanners-Bark* to make a Hot-bed, and in this Bed the Pots of the moſt tender Exotick Trees and Herbaceous Plants are plung'd; the Heat of this Bed being moderate, the Roots of the Plants are always kept in Action, and the Moiſture detain'd by the Bark keeps the Fibres of their Roots in a ductile State, which in the *Dry-Stove*, where they are placed on Shelves, are ſubject to dry too faſt, to the great Injury of the Plants. In theſe *Stoves* (if they are rightly contriv'd) may be preſerv'd the moſt tender Exotick Trees and Plants, which, before the Uſe of the Bark was introduced, were thought impoſſible to be kept in *England*: But as there is ſome Skill requir'd in the Structure of both theſe *Stoves*, I ſhall not only deſcribe them as intelligibly as poſſible, but alſo annex a Plan of the *Bark-Stove* hereto, by which it is hoped every curious Perſon will be capable of directing their Workmen in their Structure.

The Dimenſion of this *Stove* ſhould be proportion'd to the Number of Plants intended to be preſerv'd, or the particular Fancy of the Owner; but their Length ſhould not exceed forty Feet, unleſs there are two Fire-places, and in that caſe it will be proper to make a Partition of Glaſs in the Middle, and to have two Tan-pits, that there may be two different Heats, for Plants from different Countries (for the Reaſons before given in the Account of *Dry-Stoves*); and were I to erect a Range of *Stoves*, they ſhould be all built in one, and only divided with Glaſs Partitions, which will be of great Advantage to the Plants, becauſe they may have the Air in each Diviſion ſhifted by ſliding the Glaſſes of the Partitions, or by opening the Glaſs-door, which ſhould be made between each Diviſion, for the more eaſy Paſſage from one to the other.

This *Stove* ſhould be rais'd above the Level of the Ground, in proportion to the Dryneſs of the Place; for if it be built on a moiſt Situation, the whole ſhould be plac'd upon the Top of the Ground; ſo that the Brickwork in Front muſt be rais'd three Feet above the Surface, which is the Depth of the Bark-bed, whereby none of the Bark will be in Danger of lying in Water: but if the Soil be dry, the Brickwork in Front need not be more than one Foot above Ground, and the Pit may be ſunk two Feet below the Surface. Upon the Top of this Brick-work in Front muſt be laid the Plate of Timber, into which the Wood-work of the Frame is to be faſten'd, and the upright Timbers in Front muſt be placed four Feet aſunder or ſomewhat more, which is the Proportion of the Width of the Glaſs-doors or Saſhes; theſe ſhould be about ſix Feet and a half or ſeven Feet long, and plac'd upright; but from the Top of theſe ſhould be ſloping Glaſſes, which ſhould reach within three Feet of the Back of the *Stove*, where there ſhould be a ſtrong Crown-piece of Timber placed, in which there ſhould be a Groove made for the Glaſſes to ſlide into. The Wall in the Back-part of the *Stove* ſhould be thirteen Inches thick, and carry'd up about nine Feet above the Surface of the Bark-bed; and from the Top of this Wall there ſhould be a ſloping Roof to the Crown-piece where the Glaſſes ſlide in. This Crown-piece ſhould be about twenty Feet high from the Surface of the Bark-bed or Floor, which will give a ſufficient Declivity to the ſloping Glaſſes to carry off the Wet, and be of a reaſonable Height for to contain many tall Plants. The Back-roof may be ſlated, cover'd with Lead, or tiled, according to the Fancy of the Owner: But the manner of this outſide Building is better expreſs'd by the annex'd Plan, than is poſſible to be deſcrib'd in Words.

In the Front of the Houſe there ſhould be a Walk about twenty Inches wide, for the Conveniency of walking, next to which the Bark-pit muſt be plac'd, which ſhould be in Width proportionable to the Breadth of the Houſe: If the Houſe is twelve Feet wide, which is a due Proportion, the Pit may be ſeven Feet wide; and behind the Pit ſhould be a Walk eighteen Inches wide, to paſs in order to water the Plants, &c. then there will be twenty-two Inches left next the Back-Wall to erect the Flues, which muſt be all rais'd above the Top of the Bark-bed; theſe Flues ought to be ſixteen Inches wide in the Clear, that they may not be too ſoon ſtopped with the Soot; and the lower Flue, into which the Smoak firſt enters from the Fire, ſhould be two Feet deep in the Clear, and this may be cover'd either with Caſt Iron Plates or broad Tiles; over this the ſecond Flue muſt be return'd back again, which may be eighteen Inches deep, and cover'd on the Top as before; and ſo in like manner the Flues may be return'd over each other five or ſix times, that the Heat may be ſpent before the Smoak paſſes off. The Thickneſs of the Wall in Front of theſe Flues need not be more than four Inches, but muſt be well jointed with Mortar, and plaiſter'd withinſide to prevent the Smoak from getting into the Houſe, and the Outſide ſhould be faced with Mortar, and cover'd with a coarſe Cloth, to keep the Mortar from cracking, as is practis'd in ſetting up Coppers; if this be carefully done, there will be no Danger of the Smoak entering the Houſe, which can't be too carefully avoided; for there is nothing more injurious to Plants than Smoak, which will cauſe them to drop their Leaves, and if it continue long in the Houſe, will intirely deſtroy 'em.

The Fire-place may be made either at one End, or in the Middle, according as there is moſt Conveniency, for where-ever it is plac'd, it ſhould have a Shed over it, and not be expos'd to the open Air; for it will be impoſſible to make the Fire burn equally, where the Wind has full Egreſs to it, and it will be troubleſome to attend the Fire in wet Weather, where it is expos'd to the Rain.

The Contrivance of the Furnace muſt be according to the Fuel which is deſign'd to burn; but as Turf is the beſt Firing for *Stoves*, where it can be had, becauſe it burns more moderately, and laſts longer than any other Sort of Fuel, and ſo requires leſſer Attendance, I ſhall deſcribe a proper Sort of Furnace for that Purpoſe.

The whole of this Furnace ſhould be erected within the Houſe, which will be a great Addition to the Heat, and the Front-Wall on the Outſide of the Fire-place, next the Shed, ſhould be two Bricks thick, the better to prevent the Heat from coming out that Way. The Door of the Furnace, at which the Fuel is put in, muſt be as ſmall as conveniently may be to admit of the Fuel; and this Door ſhould be plac'd near the upper Part of the Furnace, and made to ſhut as cloſe as poſſible, ſo that there may but little of the Heat paſs off thro' it. This Furnace ſhould be about twenty Inches deep, and twenty Inches ſquare at Bottom, but may be ſlop'd off on every Side, ſo as to be two Feet and a half ſquare at the Top; and under this Furnace ſhould be a Place for the Aſhes to fall into, which ſhould be about a Foot deep, and as wide as the Bottom of the Furnace; this ſhould alſo have an Iron Door to ſhut as cloſe as poſſible; but juſt over the Aſh-Hole, above the Bars, which ſupport the Fuel, ſhould be a ſquare Hole about four Inches wide, to let in Air to make the Fire burn; this muſt alſo have an Iron Frame, and a Door to ſhut cloſe when the Fire is perfectly lighted, which will make the Fuel laſt the longer, and the Heat will be more moderate.

The Top of this Furnace ſhould be nearly equal to the Top of the Bark-bed, that the loweſt Flue may be above the Fire, ſo that there may be a greater Draught for the Smoak, and the Furnace ſhould be cover'd with a large Iron Plate, cloſely cemented to the Brick-work, to prevent the Smoak from getting out; and you ſhould be very careful, where-ever the Fire is plac'd, that it be not too near the Bark-bed; for the Heat of the Fire will, by its long Continuance, dry the Bark, ſo that it will loſe its Virtue, and be in Danger of taking Fire; to prevent which, it will be the beſt Method to continue a Hollow between the Brick-work of the Fire and that of the Pit, about eighteen Inches wide, which will effectually prevent any Damage ariſing from the Heat of the Fire; and there ſhould be no Wood-work plac'd any where near the Flues or the Fire-place, becauſe the continual Heat of the *Stove* may in Time dry it ſo much as to cauſe it to take Fire, which ought to be very carefully guarded againſt.

The Entrance into this *Stove* ſhould be either from a Green-houſe, the dry *Stove*, or elſe thro' the Shed where the Fire is made, becauſe in cold Weather the Front Glaſſes muſt not be open'd. The Inſide of the Houſe ſhould be clean white-waſhed, becauſe the whiter the Back-part of the Houſe is, the better it will reflect the Light, which is of great Conſequence to Plants, eſpecially in Winter, when the *Stove* is oblig'd to be ſhut up cloſe.

Over the Top Sliding-Glaſſes there ſhould be either wooden Shutters, or Tarpawlins to roll down over them in bad Weather, to prevent the Wet from getting thro' the Glaſſes, and to ſecure them from being broke by Storms of Hail, and theſe outer Coverings will be very ſerviceable to keep out the Froſt; and if in very ſevere Cold there is a Tarpawlin hung before the upright Glaſſes in the Front, it will be of great Service to the *Stove*, and a much leſs Fire will preſerve a Heat in the Houſe.

In the warmeſt of theſe Hou or Diviſions ſhould be plac'd t moſt tender Exotick Trees a Plants, a Liſt of which is as f loweth:

Acajou or *Caſhew*,
Allegator Pear,
Allſpice or *Pimento*,
Arrow Root,
Bananas,
Baſtard Cedar of *Barbados*,
Baſtard Locuſt of *Barbados*,
Bully Tree,
Button Wood of *Barbados*,
Cabbage Tree,
Cocoa Tree,
Calibaſh Tree,
Caſſada,
Caſſia Fiſtula,
Cedar Tree of *Barbados*,
Cherry Tree of *Barbados*,
Cocoa-nut Tree,
Cortex Winteranus,
Cuſtard Apple,
Date Tree,
Dumb Cane,
Fiddle wood,
Fig Tree, the *Arched Indian*,
Flower-fence of *Barbados*,
Fuſtick Tree,
Ginger,
Guajacum,
Guayava Tree,
Logwood,
Macaw Tree,
Mamee Tree,
Manchineel Tree,
Mimoſa or *Senſitive Plants*,
Nickar Tree or *Bonduc*,
Palm Trees of ſeveral Sorts,
Papaw Tree,
Plantane Tree,
Plum Tree of *Jamaica*,
Sapotilla Tree,
Sope Berry Tree,
Sowre Sop,
Sugar Apple,
Sweet Sop,
Tamarind Tree.

The

Theſe, with moſt other Sorts of Trees, Shrubs, and Herbaceous Plants from very hot Countries, ſhould be plung'd in the Bark-bed for the Reaſons already aſſign'd; and upon the Top of the Flues may be ſet the *Anana* or *Pine-Apple* Plants in Winter, as alſo the *Melon-Thiſtle*, the tender Sorts of *Cereus's* and *Euphorbiums*, with other very tender ſucculent Plants, which require to be kept dry in Winter.

As in this *Stove* are plac'd the Plants of the hotteſt Parts of the *Eaſt* and *Weſt-Indies*, ſo the Heat ſhould be kept up equal to that mark'd *Anana* upon Mr. *Fowler*'s *Thermometers*, and ſhould never be ſuffer'd to be above eight or ten Degrees cooler at moſt, nor ſhould the Spirit be rais'd above ten Degrees higher in the Thermometer; both which Extreams will be equally injurious to the Plants in the Winter Seaſon.

But in order to judge more exactly of the Temper of the Air in the *Stove*, the Thermometer ſhould be hung up at a good Diſtance from the Fire, nor ſhould the Tube be expos'd to the Sun, but on the contrary, the Back hung thereto, becauſe whenever the Sun ſhines upon the Ball of the Thermometer but one ſingle Hour, it will raiſe the Liquor in the Tube conſiderably, when perhaps the Air of the Houſe is not near ſo warm; which many times deceives thoſe who are not aware of this.

In the Management of the Plants placed in the Bark-bed, there muſt be a particular Regard had to the Temper of the Bark and the Air of the Houſe, that neither be too violent; as alſo to water 'em frequently, becauſe when they are in a continual Warmth, which will cauſe 'em to perſpire freely, if they have not a conſtant Supply to anſwer their Diſcharge, their Leaves will decay, and ſoon fall off. As to the farther Directions concerning the Culture of the particular Plants, the Reader is deſir'd to turn to their ſeveral Articles, where they are diſtinctly treated of.

The other Sort of *Stove*, which is commonly call'd the *Dry Stove* (as was before ſaid) may be either built with upright and ſloping Glaſſes at the Top, in the ſame Manner, and after the ſame Model of the *Bark-Stove*; or elſe the front Glaſſes, which ſhould run from the Floor to the Ceiling, may be laid ſloping, to an Angle of 45 Degrees, the better to admit the Rays of the Sun in Spring and Autumn: The latter Method has been chiefly follow'd by moſt Perſons who have built theſe Sort of *Stoves*; but were I to have the Contrivance of a *Stove* of this Kind, I would have it built after the Model of the *Bark-Stove*, with upright Glaſſes in Front, and ſloping Glaſſes over them, becauſe this will more eaſily admit the Sun at all the different Seaſons; for in Summer, when the Sun is high, the Top Glaſſes will admit the Rays to ſhine almoſt all over the Houſe; and in Winter, when the Sun is low, the Front Glaſſes will admit its Rays; whereas when the Glaſſes are laid to any Declivity in one Direction, the Rays of the Sun will not fall directly thereon above a Fortnight in Autumn, and about the ſame Time in Spring, and during the other Parts of the Year they will fall obliquely thereon; and in Summer, when the Sun is high, the Rays will not reach above five or ſix Feet from the Glaſſes: Beſides, the Plants plac'd toward the Back-part of the Houſe will not thrive in the Summer Seaſon for want of ſhould not have it given them in large Quantities at that Seaſon; but in the Summer they do require to be water'd more plentifully; and at leaſt once a Year they muſt be ſhifted into other Pots of a larger Size, as the Plants advance their Growth, giving 'em freſh Earth, which ſhould be light and rich.

This Plant produces its Flowers near the extream Parts of the Branches, which altho' not very beautiful, yet for the ſingular Appearance of the hairy Leaves, which adds to the Variety of exotick Plants in the Green-houſe, it deſerves a Place in every curious Garden, eſpecially as it requires no artificial Heat in Winter.

SQUASHES; *vide* Melo-pepo.

SQUILS; *vide* Scilla.

STACHYS; Baſe-Horehound.

The *Characters* are;

It hath a labiated Flower conſiſting of one Leaf, whoſe Upper-lip is ſomewhat arch'd and erect, and the Under-lip is cut into three Segments, the middle one being larger than the other two; out of the Flower-cup riſes the Pointal, attended by four Embryo's, which afterwards become ſo many Seeds, which are roundiſh, and incloſ'd in a Husk, which before was the Flower-cup: To theſe Marks may be added, downy, hoary Leaves.

The *Species* are;

1. Stachys; *major. Germanica.* C. B. P. Greater German Baſe-Horehound.

2. Stachys; *Cretica.* C. B. P. Baſe-Horehound of Candia.

3. Stachys; *Cretica, latifolia.* C. B. P. Broad-leav'd Baſe-Horehound of Candia.

4. Stachys; *minor, Italica.* C. B. P. Leſſer Italian Baſe-Horehound.

5. Stachys; *Canarienſis, fruteſcens, verbaſci folio. Tourn.* Canary ſhrubby Baſe-Horehound, with a Mullein Leaf.

There are ſeveral other *Species* of this Plant which are preſerv'd in ſome curious Botanick Gardens for Variety; but as they have little Beauty or Uſe, I ſhall not enumerate them here.

The four Sorts firſt mentioned do ſeldom abide longer than two or three Years; for after they have produced Flowers and Seeds, the old Roots are very apt to decay, unleſs part of their Flower-ſtems are taken off early in the Summer, which will cauſe them to break out again at Bottom, whereby the Roots may be preſerved.

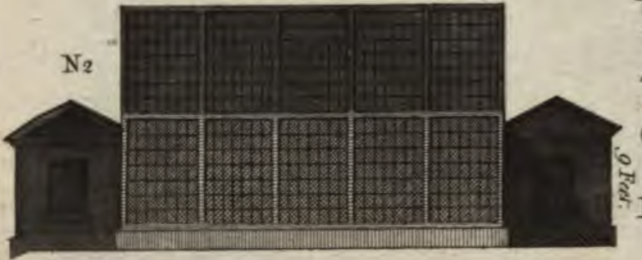
They are all propagated by Seeds, which ſhould be ſown in *March*, upon a Bed of light, freſh Earth, and when the Plants are come up, they may be planted out into other Beds about ſix Inches aſunder, obſerving to water 'em until they have taken Root, after which they will require no farther Care, but to keep 'em clear from Weeds, 'till *Michaelmas*, when they ſhould be tranſplanted where they are to remain, which muſt be in an open Situation, and upon a dry, light Soil, not too rich, in which they will endure the Winter much better than in a rich, ſtrong Soil. The Summer following theſe Plants will flower, and in *Auguſt* their Seeds will ripen, when they may be gathered and preſerv'd 'till Spring for ſowing.

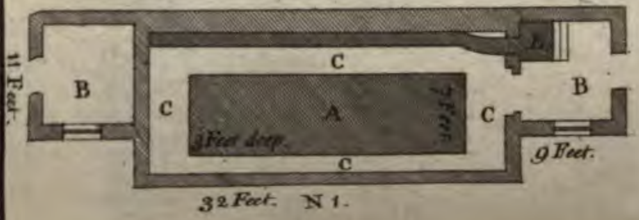
The fifth Sort is a ſhrubby Plant, which with us riſes to be ſix or ſeven Feet high; this is propagated by ſowing the Seeds upon a Bed of light, freſh Earth (as the former) and when the Plants are come up, they muſt be tranſplanted into Pots fill'd with freſh, light, ſandy Soil, placing 'em in a ſhady

Place this Cut before D.d. Vol. II.

A Plan of the Stove.

N2





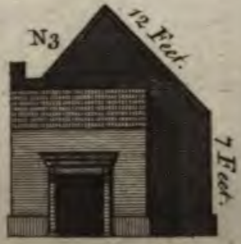
N 1.

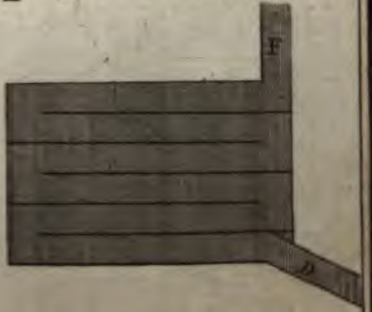
An explanation of the Draught.

N 1. *Is the Plan.*
A *The pit for yᵉ Bark.*
B *Sheds at each end one where yᵉ Fire is keep yᵉ other for a Tool house in order to make yᵉ draught uniform.*
C *The distance from the Bark Pit to yᵉ inside Wall.*
D *The funnel wᶜʰ comes from yᵉ fire*

E *Where yᵉ fire is keep wᶜʰ paſses thro' all yᵉ Flues in yᵉ back Wall.*
F *Is yᵉ Chimney where the Smoak is carried off after having Paſs'd the Flues.*
N2 *Is yᵉ Elevation of yᵉ Front.*
N3 *Is yᵉ Elevation of one end wᶜʰ shews yᵉ Slope of yᵉ Glaſs & yᵉ Angle wᶜʰ it makes with yᵉ Front.*

N3





B. Cole, Sculp.

and a half in the Front, and another of the ſame Width in the Back, for the more conveniently paſſing round the Plants to water them, and that the Air may freely circulate about them. In diſpoſing the Plants, the talleſt ſhould be plac'd backward, and the ſmalleſt in Front, ſo that there will not be Occaſion for more than five or ſix Shelves in Height at moſt; but the Scaffold ſhould be ſo contriv'd, that there may be two Shelves in Breadth laid upon every Riſe whenever there may be Occaſion for it, which will ſave a deal of Trouble in diſpoſing of the Plants.

In the Erection of theſe *Stoves*, it will be of great Service to join them all together, with only Glaſs Partitions between them, (as was before obſerv'd;) and where ſeveral of theſe *Stoves* and *Greenhouſes* are requir'd in one Garden, then it will be very proper to have the *Green-houſe* in the Middle, and the *Stoves* at each End, either in the Manner directed in the Plan of the *Green-houſe* exhibited in that Article, or carry'd on in one ſtrait Front: And in the Contrivance of theſe it may be ſo order'd, that upon opening an Iron Regulator plac'd at the End of the Flue of the *Stove*, and ſtopping another plac'd at the Entrance of the back Flue, the Smoak may be made to paſs thro' the *Green-houſe* in extream hard Froſt, which will be ſufficient to prevent its ever freezing in the Houſe: For want of which Contrivance, it is hardly poſſible to keep out the Froſt in very ſevere Winters.

By this Contrivance in the Structure of theſe Houſes, a Perſon may paſs from one to the other of them without going into the open Air; which, beſides the Pleaſure to the Owner, is alſo of great Uſe, becauſe there will be no Occaſion of making a Back-way into each of them, which otherwiſe muſt be, becauſe the Front Glaſſes of the *Stoves* ſhould not be open'd in cold Weather, if it can poſſibly be avoided on any Account, becauſe the cold Air ruſhing in, will greatly prejudice the very tender Plants.

But beſides the *Stoves* here deſcrib'd, and the *Green-houſe*, it will be very neceſſary to have a Glaſs-Caſe or two, where-ever there are great Collections of Plants. Theſe may be built exactly in the Manner already deſcrib'd for the *Stoves*, with upright Glaſſes in Front, and ſloping Glaſſes over the Top of them, which ſhould run within four Feet of the Back of the Houſe. The Height, Depth, and other Dimenſions ſhould be conformable to that of the *Stoves*, which will make a Regularity in the Building. Theſe may be plac'd at the End of the Range on each Hand beyond the *Stoves*; and if there be a Flue carry'd along under the Floor of each, which may be open'd in ſevere Froſt, (in the manner already directed for that under the Green-houſe) and the Smoak of the adjoining *Stove* made to paſs off through theſe, it will ſave a great deal of Labour, and prevent the Froſt from ever entering the Houſe, be the Winter ever ſo ſevere: But the upper Glaſſes of theſe Houſes ſhould have either Shutters to cover them, or elſe Tarpawlins to let down over them in froſty Weather; and if there is a Contrivance to cover the upright Glaſſes in Froſt, either with Mats, Shutters, or Tarpawlins, it will be of great Uſe in Winter, otherwiſe the Flue muſt be open'd when the Froſt comes on, which ſhould not be done but upon extraordinary Occaſions; becauſe the Deſign of theſe Houſes is, to keep ſuch Plants as require only to be preſerv'd from Froſt, and need no additional Warmth, but, at the ſame time, require more Air than can conveniently be given them in a Greenhouſe: In one of theſe Houſes may be plac'd all the Sorts of *Ficoides*, *African Sedums*, *Cotyledons*, *Senecio's*, and other Succulent Plants from the *Cape of Good Hope*. In the other may be plac'd the ſeveral Kinds of *Anemonoſpermos*, *Jacobæa's*, *Doria's*, *Alaternoides's*, and other woody or herbaceous Plants from the ſame Country, or any other in the ſame Latitude.

Thus by contriving the Greenhouſe in the Middle, and two *Stoves* and a Glaſs-Caſe at each End, there will be Conveniency to keep Plants from all the different Parts of the World, which can be no otherwiſe maintain'd but by placing them in different Degrees of Heat, according to the Places of their native Growth.

STRAMONIUM; Thorn-Apple.

The *Characters* are;

The Flower conſiſts of one Leaf, ſhap'd like a Funnel, and cut into ſeveral Segments; out of the Flower-cup riſes the Pointal, which, when the Flower decays, becomes a roundiſh Fruit, armed for the moſt part with ſharp Thorns, and divided into four Cells form'd by a Partition, diſpos'd in the Figure of a Croſs, furniſh'd with four Placenta's *or nutritive Membranes, to which ſeveral Kidney-ſhap'd Seeds do adhere.*

The *Species* are;

1. STRAMONIUM; *fructu ſpinoſo, rotundo, flore albo ſimplici. Tourn.* Thorn-Apple, with a round prickly Fruit, and a ſingle white Flower.

2. STRAMONIUM; *fructu ſpinoſo, oblongo, caule & flore violaceo. Boerh. Ind.* Thorn-Apple, with a longiſh prickly Fruit, and Violet-colour'd Stalks and Flowers.

3. STRAMONIUM; *ferox. Boccon.* Thorn-Apple, with very long, ſharp Prickles.

4. STRAMONIUM; *Americanum, minus, Alkekengi folio. Tourn.* Leſſer American Thorn-Apple, with a Winter-Cherry Leaf.

5. STRAMONIUM; *Malabaricum, fructu glabro, flore ſimplici violaceo. Tourn.* Malabar Thorn-Apple, with a ſmooth Fruit, and a ſingle Violet-colour'd Flower.

6. STRAMONIUM; *fructu ſpinoſo rotundo, flore violaceo duplici vel triplici. Tourn.* Thorn-Apple, with a round, prickly Fruit, and Violet-colour'd Flowers, which are two or three times double.

There are ſome other *Species* of this Plant which are preſerv'd in ſome curious Botanick Gardens, but as they have little Beauty or Uſe, ſo I ſhall not enumerate them in this Place. The firſt Sort is uſed to make a cooling Ointment, which is by many Perſons greatly eſteem'd. This, tho' not a Native of this Country, yet is now become ſo common upon Dunghills and other rich Grounds, as not to be eaſily eradicated. The Seeds falling, do continue all the Winter in the Ground, and in Spring the Plants will come up, and, if ſuffer'd to ſtand, will ſpread over the whole Spot of Ground, and produce ſuch Quantities of Seeds as to leave a Stock to furniſh the Ground for ſome Years.

The ſecond Sort is not as yet quite ſo common as the former, tho' it is equally as hardy; and where the Seeds are permitted to fall, the Plants will come up in great Plenty the following Summer. This Sort will grow much larger than the former. I have meaſured one of theſe Plants which grew upon a rich Soil upward of ſix Feet high, and divided into many ſtrong Branches, which ſpread almoſt eight Feet Diameter; ſo that 'tis unfit to ſtand in ſmall Pleaſure-Gardens, and only to have a Place in ſome outward Part of a Garden or Yard, becauſe it takes up too much Room.

The third Sort is ſomewhat like the former in the Appearance of the Plant, but the Fruit is ſmaller, and beſet with very long, fierce Thorns; for which Variety it is preſerved in the Gardens of thoſe who are curious in *Botany*.

This *Species* is by ſome ſuppos'd to be the *Dutro* of the *Perſians*, with the Seeds of which they uſe to intoxicate Perſons on whom they have any Deſigns.

This Sort is not quite ſo hardy as the two former, ſo muſt be ſown on a moderate Hot-bed in the Spring; and when the Plants are come up, they ſhould be tranſplanted on a new Hot-bed to bring the Plants forward, but you muſt be careful not to draw them too much by keeping the Glaſſes cloſe, which will render them very weak and unfit to ſtand abroad: Therefore after they have taken Root, they ſhould have Plenty of freſh Air when the Weather is warm, and in *May* they ſhould be inur'd to the open Air by degrees, into which they may be tranſplanted in *June*, obſerving to raiſe the Plants with a large Ball of Earth, and plant them in a rich Soil, giving them Water until they have taken Root. In *July* theſe Plants will flower, and their Seeds will ripen in *Auguſt*.

The fourth Sort will grow larger than the laſt mention'd. This is preſerv'd more for the ſake of its long, tubulous, white Flowers than any other Beauty in the Plant. It is ſomewhat tender, and ſhould be ſowed on a Hotbed in the Spring, and manag'd as the former, otherwiſe, if the Seaſon proves cold, the Seeds will not ripen; tho' I have ſometimes had Plants of this kind which came up from Seeds that ſcatter'd in *Autumn*, and ripen'd their Seeds well; ſo that I believe, in a few Years, it may be inur'd to this Climate, ſo as to thrive with little Care.

The fifth and ſixth Sorts do produce very beautiful Flowers, which afford an agreeable Scent at ſome Diſtance, but if ſmelt to very cloſe are offenſive to the Head. The Flowers of theſe Kinds are Violet-colour'd on the Outſide, but are white on the Inſide; and thoſe of the ſixth Sort have two or three Flowers within each other, in the manner of the *Primroſe*, which is called *Hoſe in Hoſe*. Theſe two Sorts are much more tender than either of the former, and muſt be ſown early in the Spring on a Hot-bed; and when the Plants are come up, they muſt be tranſplanted into a freſh Hot-bed to bring them forward; and as the Heat of this Bed declines, there ſhould be a freſh one prepar'd, in which ſhould be plung'd Pots fill'd with light, rich Earth, into which the Plants ſhould be plac'd, obſerving to water and ſhade them until they have taken Root; after which they ſhould have Air given to them, in Proportion to the Heat of the Seaſon, and muſt be often water'd, being very thirſty Plants.

Thus they muſt be puſhed on by Heat, in the manner directed for *Amaranths*; to which the Reader is deſir'd to turn for their farther Culture. In *July*, if the Seaſon be warm, they may be remov'd into the open Air, placing them in a warm Situation, where they will produce their Flowers plentifully; and if the *Autumn* be warm, their Seeds will ripen very well; but it will be a ſure Method to preſerve one Plant of each Kind under Glaſſes, leſt thoſe in the open Air ſhould not perfect their Seeds.

STRAWBERRY; *vide* Fragaria.

STRAWBERRY-TREE; *vide* Arbutus.

STYRAX; The Storax-Tree.

The *Characters* are;

The Flower conſiſts of one Leaf, ſhap'd like a Funnel, and cut into ſeveral Segments; out of whoſe Flower-cup riſes the Pointal, which is fix'd like a Nail in the fore-part of the Flower; this afterwards becomes a roundiſh, fleſhy Fruit, including one or two Seeds in hard Shells.

We have but one *Species* of this Plant, *viz.*

Styrax; *folio Mali Cotonei. C. B. P.* Storax-Tree, with a Quince-Tree Leaf.

This Plant grows plentifully in ſeveral Parts of *Aſia*, from whence it hath been brought into many curious Gardens in *Europe*, though at preſent it is very rare in *England.*

It may be propagated by ſowing the Seeds in Pots fill'd with freſh, light Earth, and plung'd into a moderate Hot-bed: This ſhould be done as ſoon as poſſible, when the Seeds are procur'd; for if they are ſown the latter End of Summer, and the Pots kept in a moderate Hot-bed of Tanners Bark all the Winter, the Plants will come up the ſucceeding Spring; whereas thoſe ſown in the Spring do often remain in the Ground a whole Year before the Plants come up.

When the Plants are up, they ſhould be each tranſplanted into a ſeparate ſmall Pot, fill'd with light, freſh Earth, and plung'd into a very moderate Hot-bed, obſerving to water and ſhade them until they have taken Root; after which they ſhould be inur'd to the open Air by degrees, into which they muſt be remov'd in *June*, placing them in a warm Situation, in which Place they may remain till the Beginning of *October*; at which Time they ſhould be remov'd into the Green-houſe, placing them where they may enjoy the Benefit of freſh Air when the Weather is mild; for theſe Plants are tolerably hardy, and do only require to be ſhelter'd from ſevere Froſt, for in *Italy* they grow extremely well in the open Air, and produce Fruit in great Plenty; from whence I receiv'd a Parcel of the Seeds: But as the Plants do grow very ſlowly with us, ſo it would be a good Way to procure ſome from *Italy*, which might be brought over in the Spring, pack'd up in Caſes with Moſs, as is practis'd in bringing over *Orange-Trees, Jaſmines*, &c. and theſe Plants being well grown before they are brought over, will be more hardy than thoſe rais'd from Seeds here, and will be more likely to produce Fruit.

The *Reſin* of this Tree is brought over for Medicinal Uſe.

I ſhall beg Leave to add another Tree in this Place, which altho' very different in its Characters from the foregoing, yet as it hath not been ſettled to any particular Genus by the *Botaniſts*, and having long paſs'd under the Name of *Storax*, I ſhall continue it by that Name in this Place, having the Authority of Mr. *Ray* for ſo doing.

Styrax; *arbor, Virginiana, aceris folio. Raii Hiſt.* The Virginian *Storax*-Tree, with a Maple Leaf, *commonly call'd*, Liquid-Amber.

This Tree grows very plentifully in *America*, from whence the Seeds have been brought into *England*, where there has been a great Number of Plants rais'd therefrom, which are found to be hardy enough to endure the Cold of our ordinary Winters in the open Air: And it is very probable, as the Trees grow larger, and more woody, ſo they will the better reſiſt the Cold; but while they are young, the tender Branches are very ſubject to periſh with ſevere Froſt.

This Plant may be propagated by ſowing the Seeds in the Spring in Pots fill'd with freſh, light Earth, which ſhould be plung'd into a moderate Hot-bed, and duly water'd; when the Plants are come up (which ſometimes happens in ſix Weeks after ſowing, though often they remain in the Ground until the ſecond Year; in which Caſe, the Earth of the Pots ſhould not be diſturb'd until you ſee whether the Plants will come up or not) they ſhould be carefully kept clear from Weeds, and water'd frequently; and in *June* they ſhould be remov'd into the open Air, placing them in a warm Situation, where they may remain until *October*; at which Time they ſhould be plac'd in a common Hot-bed Frame, where they will be protected from ſevere Froſt: But the Glaſſes being kept off in mild Weather, they may enjoy the free Air.

Towards the latter End of *March*, or the Beginning of *April*, theſe Plants may be taken out of the Pots, and planted into the full Ground: In order to which, a Bed or two of light, freſh Earth ſhould be prepar'd in a warm Situation, into which the Plants may be planted at about a Foot aſunder each Way, which will be full Room enough for 'em to grow two Years; and being plac'd ſo cloſe, they may be much eaſier cover'd, if the Winter ſhould prove very ſevere.

When they are planted, the Surface of the Ground muſt be cover'd with Mulch, to prevent the Wind and Sun from drying the Ground too faſt; and if the Seaſon proves dry, it will be proper to water them now and then until they have taken Root, after which they will require no farther Care but to keep them conſtantly clear from Weeds until *November* following; when it will be proper to lay a little freſh Mulch upon the Surface of the Ground to keep out the Froſt; and if the Winter ſhould be very ſevere, the Plants muſt have a little *Peas-Haulm*, or ſome Mats thrown over them to protect them from the Froſt

In theſe Beds the Plants may remain two Years; after which they ſhould be remov'd in the Spring to the Places where they are to remain, or elſe into a Nurſery, where they muſt be planted at a greater Diſtance, ſo as to have Room to grow two or three Years longer. Theſe Trees will grow very vigorouſly after they have ſtood two or three Years; ſo that when their Roots have acquired Strength, they will make great Progreſs in their Growth: With us they will grow to be upward of twenty Feet high, ſo ſhould be plac'd amongſt Trees of the ſame Growth, and in a warm Situation.

The Leaves of this Tree do ſweat out a liquid Reſin in hot Weather, which when rubbed between the Fingers, emits a fragrant Scent;

but I have not ſeen any Flowers produc'd in *England* as yet.

SUBER; The Cork-Tree.

The *Characters* are;

It is in all reſpects like the Ilex, *excepting the Bark of the Tree, which in this is thick, ſpungy, and ſoft.*

The *Species* are;

1. Suber; *latifolium, perpetuo virens. C. B. P.* The Broad-leav'd ever-green Cork-Tree.

2. Suber; *anguſtifolium, non ſerratum. C. B. P.* The narrow-leav'd Cork-Tree, with ſmooth Edges.

There are ſeveral other *Species* of this Tree mention'd in ſome of the *Italian* Catalogues of Plants; but the two Sorts here mention'd are all I have obſerv'd in the *Engliſh* Gardens.

Theſe Trees may be propagated by ſowing their Acorns in the Spring, in the manner directed for the *Ilex*, to which theſe exactly agree in Culture; therefore, to avoid Repetition, the Reader is deſir'd to turn to that Article for farther Inſtruction.

SUCCORY; *vide* Cichorium.

SUMACH; *vide* Rhus.

SYCAMORE; *vide* Acer Majus.

SYMPHYTUM; Comfrey.

The *Characters* are;

The Flower conſiſts of one Leaf, ſhap'd like a Funnel, having an oblong Tube, but ſhap'd at the Top like a Pitcher; out of the Flower-cup (which is deeply cut into five long, narrow Segments) riſes the Pointal, attended with four Embryo's, which afterwards become ſo many Seeds, in Form ſomewhat like the Head of a Viper, and do ripen in the Flower-cup.

The *Species* are;

1. Symphytum; *conſolida, major, fœmina, flore albo, vel pallidè luteo. C. B. P.* The greater Female Comfrey, with a white or pale-yellow Flower.

2. Symphytum; *conſolida, major, mas, flore purpureo. C. B. P.* The greater Male Comfrey, with a purple Flower.

3. Symphytum; *majus tuberoſâ radice. C. B. P.* Greater Comfrey, with a tuberoſe Root.

There are ſome other *Species* of this Plant which are preſerv'd in ſome curious Botanick Gardens for Variety, but thoſe here mention'd are what I have chiefly obſerv'd in *England*.

The firſt Sort grows wild upon the Sides of Banks and Rivers in divers Parts of *England*, where it is commonly gather'd to ſupply the Markets for Medicinal Uſe. The ſecond Sort is ſometimes found wild in *England*, but is leſs common than the former; in *Holland* it is the only Sort I obſerv'd wild, where it grows in great Plenty on the Sides of the Canals almoſt every where.

The third Sort I never yet obſerv'd growing wild, but it is preſerv'd in many Gardens for Variety.

All theſe Plants may be cultivated, either by ſowing their Seeds in the Spring, or by parting of their Roots; the latter Way, being the moſt expeditious, is chiefly practis'd, where they are planted for Uſe. The beſt Seaſon for parting their Roots is in *Autumn*, at which Time almoſt every Piece of a Root will grow: They ſhould be planted about eighteen Inches aſunder, that they may have Room to ſpread, and will require no farther Care but to keep them clear from Weeds, for they are extream hardy, and will grow upon almoſt any Soil, or in any Situation.

SYRINGA; The Mock-Orange; *vulgô.*

The *Characters* are;

The Flower, for the moſt part, conſiſts of five Leaves, which are plac'd circularly, and expand in Form of a Roſe; from whoſe Flower-cup riſes the Pointal, which afterwards becomes a roundiſh Fruit adhering to the Flower-cup, divided into four Cells, which are full of ſmall Seeds.

The *Species* are;

1. SYRINGA; *alba, ſive Philadelphus Athenai. C. B. P.* The common white *Syringa* or Mock-Orange.

2. SYRINGA; *flore albo pleno. C. B. P.* The double white *Syringa.*

3. SYRINGA; *flore albo ſimplici, foliis ex luteo variegatis.* The ſtrip'd-leav'd *Syringa.*

4. SYRINGA; *nana, nunquam florens.* The Dwarf *Syringa.*

The firſt Sort is very common in moſt *Engliſh* Gardens, but the ſecond is not quite ſo plenty, though, indeed, it is a Variety ſcarce worth obſerving, ſince the Flowers are always ſingle where they are produc'd in Bunches; and where they are produc'd ſingly, they are double: But this ſo rare, that many times upon a large Shrub there can't be found ſix double Flowers.

The variegated Sort is preſerv'd in the Gardens of ſuch as are curious in ſtrip'd Plants, tho' there is no great Beauty in it, becauſe when the Plants are vigorous, the Stripes in the Leaves do ſcarcely appear.

The Dwarf Sort is not worth a Place in a Garden, unleſs for the Sake of Variety, ſince it never produces any Flowers.

All theſe Plants may be eaſily propagated, by taking off their Suckers in *Autumn* (which they produce very plentifully) and planting them out in a Nurſery at three Feet Diſtance Row from Row, and a Foot aſunder in the Rows, obſerving to keep the Ground between them conſtantly clear from Weeds, as alſo to dig it up every Spring to looſen it, that the Roots of the Plants may more readily extend themſelves. In this Nurſery they may remain two Years, by which Time they will be fit to tranſplant out where they are to remain; which may be into ſmall Wilderneſs-Quarters, or amongſt flowering Shrubs in Clumps, obſerving to place them with other Sorts of Shrubs of the ſame Growth, for theſe ſeldom do grow above ſix or ſeven Feet high in *England,* and the Dwarf Sort not more than three or four.

They are extream hardy, ſo may be planted in almoſt any Soil or Situation, and will require no farther Culture but to take off the Suckers every Year, and cut out the dead Wood, as alſo to keep them clear from Weeds in Summer, and dig the Ground about their Roots every Winter, which will make them thrive and flower very plentifully. The Seaſon of their Flowering is in *May,* and in cool Seaſons they do continue in Beauty the firſt Part of *June:* Their Flowers have a Scent ſomewhat like thoſe of the *Orange-Tree,* from whence it had the Name of *Mock-Orange:* But if theſe are plac'd in a cloſe Room, or are ſmelt to too cloſely, they have a ſtrong diſagreeable Scent, and too powerful for the Ladies; but when they are in the open Air, the Scent is not ſo affecting.

T A

TAGETES; African *or* French Marygold.

The *Characters* are;

The Flower is radiated, conſiſting of divers Florets, which are plain, and cut into ſeveral Segments; but the Disk of the Flower conſiſts of half Florets, which ſtand upon the Embryo's; the Flower-cup conſiſts of one Leaf, is tubulous, and encloſes the Embryo's, which afterwards become angular Seeds, with a Leaf upon the Head of each.

The *Species* are;

1. TAGETES; *maximus, rectus, flore ſimplici ex luteo pallido. J. B.* Greateſt upright African Marygold, with a ſingle, pale, yellow Flower.

2. TAGETES; *maximus, rectus, flore maximo multiplicato. J. B.* Greateſt upright African Marygold, with a large double Flower.

3. TAGETES; *maximus, rectus, flore maximo multiplicato, aurantii coloris.* Greateſt upright African Marygold, with a very large double Orange-colour'd Flower.

4. TAGETES; *maximus, rectus, flore maximo multiplicato, ſulphureo coloris.* Greateſt upright African Marygold, with a very large double Brimſtone-colour'd Flower.

5. TAGETES; *maximus, rectus, flore maximo multiplicato, pallidè luteo, odorato.* Greateſt upright African Marygold, with a very large double Flower, of a pale, yellow Colour, and a ſweet Scent.

6. TAGETES; *maximus, rectus, flore maximo multiplicato, pallidè luteo & fiſtuloſo.* Greateſt upright African Marygold, with a large, double, pale, yellow, and piped Flower, *commonly call'd,* The Quilled African.

7. TAGETES; *Indicus, medius, flore ſimplici, luteo-pallido. J. B.* Indian middle French Marygold, with a ſingle, pale, yellow Flower.

8. TAGETES; *Indicus, medius, flore luteo multiplicato. H. L.* The middle French Marygold, with a double yellow Flower.

9. TAGETES; *Indicus, minor, ſimplici flore, ſive Caryophyllus Indicus ſive flos Africanus. J. B.* Leſſer *or* Common French Marygold, with a ſingle Flower, *call'd* Indian Clove July-flower.

10. TAGETES; *Indicus, minor, multiplicato flore. J. B.* Double French Marygold; *vulgò.*

11. TAGETES; *Indicus, flore ſimplici, fiſtuloſo. H. L.* Single French Marygold, with a piped Flower.

12. TAGETES; *Indicus, flore fiſtuloſo, duplicato. H. L.* Double French Marygold, with a piped Flower.

13. TAGETES; *Indicus, minimus, flore ſericea hirſutie obſito. H. L.* The leaſt French Marygold, with a ſoft hairy Flower.

All theſe Plants are annual, ſo muſt be propagated from Seeds every Spring, which may be ſown upon a moderate Hot-bed in *March*; and when the Plants are come up, they ſhould have Plenty of freſh Air, for if they are drawn too much, they will not afterward become handſome, notwithſtanding they have all poſſible Care taken of them. When they are about three Inches high, they ſhould be tranſplanted on a freſh Hot-bed, which may be arched over with Hoops, and covered with Mats (for theſe Plants are hardy enough to be brought up without Glaſſes :) In this Bed they ſhould be planted about

bout ſix Inches aſunder each Way, obſerving to water and ſhade them until they have taken Root; but as the Plants do acquire Strength, ſo they ſhould be inur'd to bear the open Air by Degrees; and about the Beginning of *May*, they ſhould be taken up, with a Ball of Earth to the Root of each Plant, and plac'd in a Nurſery in a warm Situation, about eighteen Inches aſunder, obſerving to water and ſhade them until they have taken Root, and in very dry Weather, the Waterings ſhould be repeated: In this Nurſery they may remain until their Flowers appear, ſo as to diſtinguiſh thoſe with double Flowers: which may be taken up with a Ball of Earth to each Plant, and planted into the Borders of the Parterre Garden, or into Pots, for furniſhing the Courts, *&c.* where the ſeveral Varieties being intermix'd with other annual Plants, do afford an agreeable Variety.

Thoſe with ſingle Flowers ſhould be pull'd up, and thrown away as good for little, becauſe the Seeds produc'd from them will rarely produce double Flowers; therefore great Care ſhould be taken to ſave only the Seeds of thoſe whoſe Flowers are very double of every kind, from which there will always be a good Quantity of double ones produc'd, tho' from the very beſt Seeds there will always be many ſingle Flowers; but the ſmall Sorts do always produce a greater Number of double Flowers than the large, which are more apt to degenerate.

Theſe Plants have a ſtrong, diſagreeable Scent, eſpecially when handled; for which Reaſon they are not ſo greatly eſteem'd for planting near Habitations: but the Flowers of the ſweet-ſcented Sort being more agreeable, are moſtly coveted to plant in ſmall Gardens. All theſe Sorts do begin to flower in *May*, and continue all the latter Part of the Year, until the Froſt prevents their Flowering: for which, together with the little Trouble requir'd in their Culture, they have greatly obtain'd in moſt *Engliſh* Gardens.

TAMARINDUS; The Tamarind-Tree.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves, which are ſo plac'd as to reſemble a papilionaceous one in ſome meaſure; but theſe expand circularly: From whoſe many-leav'd Flower-cup riſes the Pointal, which afterwards becomes a flat Pod, containing many flat angular Seeds, ſurrounded with an acid, blackiſh Pulp.

We have but one *Species* of this Tree; *viz.*

TAMARINDUS; *Raii Hiſt.* The *Tamarind*-Tree.

There are ſome who imagine the *Tamarind*-Tree of the *Eaſt-Indies*, and that of the *Weſt-Indies* to be different, but I don't remember to have ſeen them diſtinguiſh'd by any Botanick Author; though, indeed, from the different Appearance of the Pods, they ſeem very different; for the Pods which I have ſeen of the *Eaſt-Indian* Sort were very long, and contain'd ſix or ſeven Seeds in each; whereas thoſe of the *Weſt-Indies* do rarely contain more than three or four: but from the Plants which I have rais'd from both Sorts of Seeds, I can't diſtinguiſh them aſunder as yet.

Theſe Trees do grow to a great Magnitude in their native Countries; but in *Europe* they are preſerv'd as Curioſities by thoſe who are Lovers of rare Plants.

They are eaſily propagated by ſowing their Seeds on a Hot-bed in the Spring; and when the Plants are come up, they ſhould be planted each into a ſeparate ſmall Pot fill'd with light rich Earth, and plung'd into a Hot-bed of Tanners-Bark, to bring 'em forward, obſerving to water and ſhade them until they have taken Root; and as the Earth in the Pots appears dry, ſo they muſt be water'd from time to time, and ſhould have Air given to them in Proportion to the Warmth of the Seaſon, and the Bed in which they are plac'd: When the Pots in which they are planted are fill'd with their Roots, the Plants ſhould be ſhifted into Pots of a larger Size, which muſt be fill'd up with rich light Earth, and again plung'd into the Hot-bed, giving them Air, as before, according to the Warmth of the Seaſon: But in very hot Weather the Glaſſes ſhould be ſhaded with Mats in the Heat of the Day, otherwiſe the Sun will be too violent for them through the Glaſſes: Nor will the Plants thrive if they are expos'd to the open Air, even in the warmeſt Seaſon, ſo that they muſt be conſtantly kept in the Bark-ſtove both Winter and Summer, treating them, as hath been directed, for the *Anana's*, with whoſe Culture they will thrive exceedingly.

Theſe Plants, if rightly manag'd, will grow very faſt, for I have had 'em upwards of three Feet high in one Summer from Seed, and had one Plant which produc'd Flowers the ſame Seaſon it was ſown; but this was accidental, for I have never ſince had any of them flower, altho' I have ſeveral Plants of different Ages, one of which is ſeveral Years old, and about ſeven Feet high, with a large ſpreading Head.

TAMARISCUS: The Tamariſk-Tree.

The *Characters* are;

The Flowers are roſaceous, conſiſting of ſeveral Leaves, which are plac'd orbicularly; from whoſe Flower-cup riſes the Pointal, which afterwards becomes a Pod (ſomewhat like thoſe of the Sallow) *which opens into two Parts, and contains ſeveral downy Seeds.*

The *Species* are;

1. Tamariscus; *Narbonenſis. Lob. Icon.* The French *or* narrow-leav'd *Tamariſk-Tree.*

2. Tamariscus; *Germanica. Lob. Icon.* The German *Tamariſk.*

Theſe Trees are preſerv'd in the Gardens of thoſe who are curious in collecting the various kinds of Trees and Shrubs; but they have not much Beauty to recommend them; for their Branches are produc'd in ſo ſtraggling a manner, as not by any Art to be train'd up regularly, and their Leaves are commonly thin upon the Branches, and do fall away in Winter, ſo that there is nothing to recommend them but their Oddneſs.

They may be eaſily propagated, by laying down their tender Shoots in the Spring, or by planting Cuttings in an Eaſt Border at that Seaſon, which, if ſupply'd with Water in dry Weather will take Root in a ſhort time, but they ſhould not be remov'd until the following Spring; at which Time they may be either plac'd in a Nurſery, to be train'd up two or three Years, or elſe into the Quarters where they are deſign'd to remain, obſerving to mulch their Root, and water them according as the Seaſon may require, until they have taken Root; after which,

ly Culture they will require,
prune off the ſtraggling
, and keep the Ground clean
them.

ſe Plants delight in a ſandy
ıot over rich, and ſhould be
amongſt Shrubs of a mid-
Growth, for they rarely grow
fifteen or ſixteen Feet high
land, but are very hardy in
: to Cold.

MNUS; the Black Briony.

'he *Characters* are;

Male and Female in different
; *the Flowers of the Male*
conſiſt of one Leaf, and are
p'd, but theſe are barren;
nbryo's are produced on the
Plants, which afterwards be-
n oval Berry, including roun-
ds. To theſe Notes ſhould be
that theſe Plants have no
s, as the White Briony hath.

have but one *Species* of this
n *England*, viz.

ɪɴᴜꜱ; *racemoſa, flore minore*
allaſcente. Tourn. The com-
lack Briony.

Plant is rarely cultivated in
ıs, but grows wild under
s in divers Parts of *England*,
there gather'd for medicinal
It may be eaſily propagated
wing the Seeds ſoon after
re ripe, under the Shelter of
, where, in the Spring, the
will come up, and ſpread
ranches over the Buſhes, and
t themſelves, requiring no
Care; and their Roots will
many Years in the Ground,
ıt decaying.

NACETUM; Tanſy.

he *Characters* are;

ath a floſculous Flower, con-
of many Florets, divided into
Segments ſitting on the Em-
nd contained in a ſquamous and hemiſpherical Empalement; the Embryo afterwards becomes a Seed, not at all downy. To theſe Notes muſt be added, thick Flowers gather'd into a kind of Head.

The *Species* are;

1. Tᴀɴᴀᴄᴇᴛᴜᴍ; *vulgare luteum. C. B. P.* Common Tanſy.

2. Tᴀɴᴀᴄᴇᴛᴜᴍ; *foliis criſpis. C. B. P.* Curled *or* Double Tanſy.

3. Tᴀɴᴀᴄᴇᴛᴜᴍ; *vulgare, foliis variegatis.* Common Tanſy with ſtrip'd Leaves.

4. Tᴀɴᴀᴄᴇᴛᴜᴍ; *vulgare luteum maximum. Boerh. Ind.* The largeſt Common Tanſy.

5. Tᴀɴᴀᴄᴇᴛᴜᴍ; *Africanum, arboreſcens, foliis Lavendulæ, multifido folio. H. Am.* African ſhrubby Tanſy with Leaves like the multifid Lavender.

The firſt and ſecond Sorts are very common in *England*, being promiſcuouſly cultivated in Gardens for the Uſe of the Kitchen; but the firſt ſhould be propagated for medicinal Uſe. The third Sort is a Variety of the firſt, which is by ſome preſerved for the Sake of its variegated Leaves. The fourth Sort is very like the Common in Appearance, but is much larger, and has leſs Scent.

All theſe Sorts are eaſily propagated by their creeping Roots, which if permitted to remain undiſturb'd, will in a ſhort Time over-ſpread the Ground where they are planted; ſo that the Slips ſhould be placed at leaſt a Foot aſunder, and in particular Beds, where the Paths round them may be often dug, to keep their Roots within Bounds. They may be tranſplanted either in Spring or Autumn, and will thrive in almoſt any Soil or Situation.

The common *Tanſy* is greatly uſed in the Kitchen early in the Spring, at which Seaſon that which is in the open Ground, or eſpecially in a cold Situation, is hardly forward enough to cut; ſo that where this is much wanted at that Seaſon, it is the beſt Way to make a gentle Hot-bed in *December*, and plant the old Roots thereon, without parting 'em, and arch the Bed over with Hoops, to cover it with Mats in cold Weather, by which Method the *Tanſy* will come up in *January*, and be fit to cut in a ſhort Time after.

The fifth Sort was brought from the *Cape of Good-Hope*, and is preſerved in the Gardens of thoſe who are curious in collecting exotick Plants. This may be propagated by planting Cuttings or Slips, during any of the Summer Months, upon a Bed of light rich Earth, obſerving to water and ſhade 'em until they have taken Root, after which they may be taken up, and planted in Pots filled with light freſh Earth, placing them in a ſhady Situation until they have taken new Root, and then they may be expoſed in an open Place, amongſt other exotick Plants, until the Beginning of *October*, when they muſt be removed into the Green-houſe, obſerving to place 'em in the cooleſt Part thereof, and as near the Windows as poſſible, that they may enjoy the free Air in mild Weather, otherwiſe they will draw up weak, and be liable to grow mouldy, and decay.

They muſt alſo be frequently watered, but in very cold Weather they muſt not have too much Water given them at each Time, tho' in Summer they ſhould have it in Plenty. With this Management (together with obſerving to ſhift 'em into larger Pots, as they ſhall require it) the Plants will grow large, and produce a great Quantity of Flowers, which commonly appear early in the Spring, and thereby greatly add to the Variety of the Green-houſe.

TAN or TANNERS BARK, is the *Bark* of the Oak-tree, chopped and ground into coarſe Powder, to be uſed in Tanning or Dreſſing of Skins; after which it is of great Uſe in Gardening: Firſt, by its Fermentation (when laid in a Body) which is always moderate, and of a long Duration, which renders it of great Service to Hot-beds; and ſecondly, after it is well rotted, it becomes excellent Manure for all Sorts of cold ſtiff Land, upon which one Load of *Tan* is better than two of the beſt rotten Dung, and will continue longer in the Ground.

The Uſe of *Tan* for Hot-beds has not been very many Years known in *England*, and was brought over firſt from *Holland*, where it had been long uſed for thoſe Purpoſes: I have been informed that it was firſt uſed in *England* for raiſing Orange-trees, which was about the Beginning of King *William's* Reign; but it was diſuſed long after that, and it is within fifteen or ſixteen Years paſt, that it was again brought into Uſe, for raiſing the Pine-Apple; ſince which Time it has yearly grown more in Uſe for Hot-beds; and I doubt not but in a few Years it will be generally uſed for thoſe Purpoſes, where-ever it can be procured eaſily.

There are commonly two or three Sorts of *Tan*, which are ground into Powder of different Sizes, ſome being in very groſs Pieces, and others are ground very fine; theſe are different in their Effects when laid to ferment, for the ſmall Sort will heat more violently, but will loſe its Heat in a ſhort

Time, but the large Sort being moderate in Fermentation, does continue its Heat a long Time: So that whoever makes a Hot-bed of *Tan*, muſt proportion a Mixture of each Sort according as they would have their Beds work; for if they intend to have a moderate Heat, and can ſtay a Fortnight or three Weeks for its beginning to ferment, they ſhould uſe but very little ſmall *Bark:* but where the Heat is wanted ſooner, there ſhould be a larger Proportion of the ſmall *Bark*.

This *Tan* ſhould be taken in a Fortnight's Time after it comes out of the Pit, and laid up in a round Heap for a Week, to drain; (eſpecially if it be in Winter or Spring, while the Seaſon is moiſt) after which it may be put into the Trench where the Hot-bed is deſign'd, which ſhould be brick'd on the Sides quite round, to prevent the Earth from mixing with the *Bark*. Theſe Trenches ſhould be proportioned to the Size of the Frames which are to cover them, and the Depth in the Ground according to the Moiſture of the Place where they are ſituated; for if the Ground is very wet, the Bed ſhould be rais'd above the Surface of the Ground, becauſe if ever the Water riſes into the *Bark*, it will cool it ſo much as not to be brought again to its former Heat, without taking it out of the Trench again, and freſh mixing it up.

The Thickneſs which the Bark ſhould be laid in the Trench, muſt not be leſs than three Feet, and the Width four Feet; for where it is laid in a leſs Body, it ſeldom heats, and if it is forced by laying hot Dung under it (as is ſometimes practis'd) the Heat will ſoon decay: In laying the *Bark* into the Trench, you ſhould be careful to ſtir up every Part of it, that it may not ſettle in Lumps; as alſo to preſs it down gently, but by no Means tread or beat it down too cloſe, which will prevent its heating. Then the Glaſſes ſhould be placed over the Bed immediately after it is finiſhed, which ſhould be kept cloſe down, in order to draw a Heat in the *Bark*, and to prevent Wet from falling thereon; in a Fortnight's Time after, the *Bark* will begin to heat, and when it is found of a due Temper, the Plants may be removed into it.

A Hot-bed well prepared with this *Tan*, will continue a moderate Heat upward of ſix Months, and there being very little Steam ariſing from it, in compariſon to Horſe-dung, renders it much better for the Growth of all Sorts of Plants; and when the Heat begins to decay, if the *Tan* be freſh ſtirred up, and a little new added to it, it will heat again and continue ſome Months longer. The farther particular Directions for the Management of theſe Hot-beds, being already exhibited under the Article of *Hot-beds*, the Reader is deſired to turn back to that for farther Inſtructions.

TARRAGON; *vide* Draco Herba.

TAXUS; the Yew-Tree.

The *Characters* are;

It hath amentaceous Flowers, which conſiſt of many Apices, for the moſt part ſhap'd like a Muſhroom, and are barren; but the Embryo's (which are produced at remote Diſtances on the ſame Tree) do afterwards become hollow, Bell-ſhap'd Berries, which are full of Juice, and include Seeds ſomewhat like Acorns, having, as it were, a little Cup to each.

The *Species* are;

1. Taxus; *J. B.* The common Yew-tree.

2. Taxus; *folio latiori, magiſque ſplendente. Boerh. Ind.* Yew-tree with a broader and more ſhining Leaf.

3. Taxus; *foliis variegatis. H. R. Par.* The Yew-tree with ſtrip'd Leaves.

The two firſt Sorts are often promiſcuouſly cultivated in Gardens, without Diſtinction; but the third is preſerved by ſome for the Sake of its variegated Leaves: Though there is very little Beauty in them; for during the Summer Seaſon, when the Plants are in Vigour, the Stripes in the Leaves are hardly to be perceived, but in Winter they are more obvious; however, the Stripe being rather a Blemiſh than any real Beauty, it is hardly worth preſerving.

There is hardly any Sort of ever-green Tree which has been ſo generally cultivated in the *Engliſh* Gardens, upon the Account of its being ſo tonſile, as to be with Eaſe reduc'd into any Shape the Owner pleas'd, and it may be too often ſeen, eſpecially in old Gardens, what a wretched Taſte of Gardening did generally prevail, from the monſtrous Figures of Beaſts, *&c.* we find theſe Trees reduced into; but of late this Taſte has been juſtly exploded by many Perſons of ſuperior Judgment: For what could be more abſurd than the former Methods of planting Gardens? where, in the Part next the Habitation, were crowded a large Quantity of theſe and other Sorts of ever-green Trees, all of which were ſheered into ſome trite Figure or other; which, beſides the obſtructing the Proſpect from the Houſe, occaſion'd an annual Expence to render the Trees diſagreeable. For there never was a Perſon who had conſider'd the Beauty of a Tree in its natural Growth, with all its Branches diffus'd on every Side, but muſt acknowledge ſuch a Tree infinitely more beautiful than any of thoſe ſhorn Figures, ſo much ſtudied by Perſons of a groveling Imagination.

The only Uſe I would recommend this Tree for in Gardens, is to form Hedges for the Defence of exotick Plants, for which Purpoſe it is the moſt proper of any Tree in Being: The Leaves being ſmall, the Branches are produc'd very cloſely together, and if carefully ſhorn, they may be render'd ſo cloſe, as to break the Winds better than any other Sort of Fence whatever, becauſe they will not be reverberated, as againſt Walls, Pales, and other cloſe Fences, and ſo conſequently are much to be preferr'd for ſuch Purpoſes.

Theſe Trees may be eaſily propagated by ſowing their Berries in Autumn, as ſoon as they are ripe (without clearing 'em from the Pulp which ſurrounds them, as hath been frequently directed) upon a Bed of freſh undung'd Soil, covering 'em over about half an Inch thick with the ſame Earth.

In the Spring the Bed muſt be carefully clear'd from Weeds, and if the Seaſon prove dry, it will be proper to refreſh the Bed with Water now and then, which will promote the Growth of the Seeds, many of which will come up the ſame Spring, but others will remain in the Ground until the Autumn or Spring following; but where the Seeds are preſerved above Ground 'till Spring before they are ſown, the Plants do never come up 'till the Year after, ſo that by

ſowing

g the Seeds as ſoon as they
pe, there is many times a
Year ſaved.
ſe Plants, when they come
hould be conſtantly clear'd
Weeds, which if permitted
w amongſt 'em, would cauſe
Bottoms to be naked, and
times deſtroy the Plants
they continue long undi-
l.
his Bed the Plants may remain
Years; after which, in the
g of the Year, there ſhould
Spot of freſh undung'd Soil
ed, into which the Plants
be removed the Beginning
ril, placing 'em in Beds about
or five Feet wide, planting
in Rows about a Foot aſunder,
x Inches Diſtance from each
in the Rows; obſerving to
little Mulch upon the Surface
Ground about their Roots,
to water them in dry Wea-
ntil they have taken Root,
which they will require no
r Care, but to keep 'em clear
Weeds in Summer, and to
hem according to the Purpoſe
hich they are deſign'd.
theſe Beds they may remain
or three Years, according as
ave grown, when they ſhould
ain remov'd into a Nurſery,
g 'em in Rows at three Feet
ce, and the Plants eighteen
s aſunder in the Rows, ob-
g to do it in the Spring, as
before directed, and continue
m 'em in the Summer Seaſon,
ding to the Deſign for which
are intended; and after they
continued three or four Years
is Nurſery, they may be tranſ-
d where they are to remain,
s obſerving to remove 'em in
pring.

Theſe Trees are very ſlow in growing, but yet there are many very large Trees upon ſome barren cold Soils in divers Parts of *England*; the Timber of theſe Trees is greatly eſteem'd for many Uſes.

TEREBINTHUS; The Turpentine Tree.

The *Characters* are;

It is Male and Female in different Plants; the Flowers of the Male have no Petals, but conſiſt of a Number of Stamina *with Chives; the Embryo's which are produced on the Female Trees do afterwards become an Oval Fruit with a hard Shell, incloſing one or two oblong Kernels. To theſe Notes muſt be added, the Leaves are pennated, or winged, which are produced by Pairs oppoſite, and end in a ſingle Lobe.*

The *Species* are;

1. **Terebinthus**; *vulgaris. C. B. P.* The common Turpentine Tree.

2. **Terebinthus**; *Indica, Theophraſti, Piſtachia Dioſcoridis. Lob. Adv.* The Piſtachia Tree, *vulgò.*

Theſe Trees are very common in ſeveral Iſlands of the *Archipelago*, from whence there are annually great Quantities of the *Piſtachia* Nuts brought into *England*, which do eaſily riſe if ſown on a Hot-bed in the Spring; ſo that the Trees of this Kind are much more common in *England* than are thoſe of the firſt Sort, whoſe Fruit are rarely brought over freſh: Beſides, the Shell of theſe Nuts is much harder than thoſe of the *Piſtachia*, ſo that many times the Plants do not come up until the ſecond Year, which may alſo have contributed to the preſent Scarcity of the Plants in *England*.

The Seeds (or Nuts) of both theſe Trees ſhould be ſown in Pots fill'd with freſh, light Earth, and plung'd into a moderate Hot-bed, obſerving to refreſh the Earth with Water frequently, as it may have Occaſion; and when the Plants are come up (which thoſe of the *Piſtachia* will do in ſix Weeks after ſowing) they ſhould be inur'd to bear the open Air by Degrees, into which they muſt be remov'd the Beginning of *June*, placing them where they may be ſcreen'd from the Violence of the Winds, in which Situation they may remain until *October*, when they ſhould be remov'd either into a common Hot-bed Frame, or elſe into a Green-houſe, where they may be defended from hard Froſt, but ſhould have as much free Air as poſſible in mild Weather, and muſt be frequently refreſh'd with Water.

In *March* following theſe Plants ſhould be remov'd, and each planted in a ſeparate Pot, fill'd with freſh light Earth, and as the Spring advances, ſo they ſhould be again remov'd into the open Air, and placed amongſt other Exotick Plants, obſerving to water them frequently in dry Weather; and when their Roots are confin'd by the Smallneſs of the Pots, they muſt be ſhifted, being careful not to break the Earth off from their Roots, which will greatly injure them, unleſs it be done before the Plants begin to ſhoot in the Spring, for at that Seaſon they may be tranſplanted with as much Safety as any other deciduous Trees.

In this Manner theſe Plants ſhould be treated for three or four Years, while young, after which Time the *Piſtachia*'s may be planted into the full Ground, obſerving to place them in a warm Situation and dry Soil, where they will endure the Cold of our ordinary Winters very well, as may be ſeen by a very large Tree of this Kind, now growing in the Gardens of the Earl of *Peterborough*, at *Parſon's-Green* near *Fulham*, which produces abundance of Fruit, without any manner of Care. Nor do I believe, but that the common *Turpentine Tree* would endure the Cold of our Climate, if after the Plants have acquir'd Strength, they are planted againſt a good Wall upon a dry Soil; for much Wet about the Roots of theſe Trees in Winter, is very often the Occaſion of their rotting, whereby the Trees are deſtroy'd

TEUCRIUM; Tree Germander.

The *Characters* are;

The Flower-cup is divided into five Parts at the Top, but is of the Bell-ſhap'd Kind; the Flower has no Galea *or Creſt, but inſtead thereof, the* Stamina *occupy the upper Part; the Beard, or Lower-lip, is cut into five Parts, the middle Segment being larger, is hollowed like a Spoon; in the Center of the Flower riſes the Pointal, attended by four Embryo's, which afterwards become ſo many Seeds, ſhut up in a Husk, which was before the Flower-cup. To theſe Notes ſhould be added, the Flowers are produc'd from the Wings of the Leaves.*

The *Species* are;

1. TEUCRIUM; *multis. J. B.* Common Tree Germander.
2. TEUCRIUM; *Bœticum. Cluſ. Hiſt.* Spaniſh Tree Germander.
3. TEUCRIUM; *Bœticum, calice campanulato, folio eleganter variegato. Boerh. Ind.* Spaniſh Tree Germander with a ſtrip'd Leaf.

There are ſome other *Species* of this Plant, which are preſerved in curious Botanick Gardens for Variety; but as they are of little Uſe or Beauty, it would be needleſs to enumerate them.

The firſt Sort here mention'd was formerly preſerved in Green-houſes with great Care, but of late Years it hath been planted out into the open Air, and is found hardy enough to endure the Cold of our ſevereſt Winters without Shelter, provided it be planted on a dry Soil.

This may be propagated by planting Cuttings in the Spring, on a Bed of freſh light Earth, obſerving to ſhade and water them until they have taken Root, after which they will require no farther Care, but to keep them clear from Weeds until the following Spring, when they may be tranſplanted out into the Places where they are to remain, being careful in removing them, not to ſhake off all the Earth from their Roots, as alſo to water them until they have taken freſh Root, after which the only Care they require, is to keep the Ground clean about them, and to prune off ſuch Shoots as are ill ſituated, whereby their Heads will appear more regular.

The *Spaniſh* Sort is tenderer than the former, though that will endure the Cold of our ordinary Winters, if planted on a dry Soil, and in a warm Situation; but in a ſevere hard Froſt it is often deſtroy'd, for which Reaſon the Plants are generally preſerved in Pots, and removed into the Green-houſe in Winter. This is propagated in the ſame Manner as the former.

The Sort with ſtrip'd Leaves is leſs common than the plain; and is valued by thoſe that delight in variegated Plants. This is ſomewhat tenderer than the plain Sort, but may be propagated and preſerved in the ſame Manner, only obſerving to place it in a warmer Part of the Green-houſe in Winter.

There is no very great Beauty in theſe Plants; but they are preſerved for the Sake of Variety, by thoſe who are curious in collecting the various Kinds of exotick Plants.

THALICTRUM; Meadow Rue.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves, placed orbicularly, which expand in Form of a Roſe, in the Middle of which ariſe numerous Cluſters of Chives, encompaſſing the Pointal, which afterwards becomes a Fruit, in which are collected, as in a little Head, the Capſules, which are ſometimes winged and ſometimes without Wings, each containing one Seed, for the moſt part oblong.

The *Species* are;

1. THALICTRUM; *Alpinum, aquilegiæ foliis, florum ſtaminibus purpuraſcentibus. Tourn.* Alpine Meadow Rue with Columbine Leaves, and the Chives of the Flower of a purpliſh Colour, *commonly called*, the Feather'd Columbine.

2. THALICTRUM; *Alpinum majus, aquilegiæ foliis, florum ſtaminibus albis, caule viridi. Tourn.* Greater Alpine Meadow Rue with Columbine Leaves, white Chives to the Flowers, and a green Stalk.

3. THALICTRUM; *Canadenſe, caule purpuraſcente, aquilegiæ foliis, florum ſtaminibus albis. Tourn.* Canada Meadow Rue, with a purpliſh Stalk, Columbine Leaves, and white Chives to the Flower.

4. THALICTRUM; *Americanum minus. Park. Theat.* Leſſer American Meadow Rue.

There are many other *Species* of this Plant, which are preſerv'd in Botanick Gardens for Variety; ſome of which are Natives of *England*, but thoſe above-mention'd are all the Sorts which I have obſerved to be cultivated in the Flower-Gardens for their Beauty. All theſe Sorts are commonly known by the Name of *Feather'd* or *Spaniſh Columbine* among the Gardeners, which Names I ſuppoſe, they received from the Similitude that the Leaves of theſe Plants bear to thoſe of Columbine, though their Flowers are very different therefrom.

Theſe Plants are propagated by parting their Roots; the beſt Time for this Work is in *September*, when their Leaves begin to decay, that they may take freſh Root before the Froſt comes on to prevent them. They ſhould alſo be planted in a freſh light Soil, and have a ſhady Situation, in which they will thrive exceedingly, though they may be planted in almoſt any Soil or Situation, provided it be not too hot and dry. Theſe Roots ſhould not be parted or removed oftener than every other Year, but if they are permitted to ſtand three Years, they will flower much ſtronger for it.

They may alſo be propagated by ſowing their Seeds on an Eaſt Border, ſoon after they are ripe, obſerving to keep the Ground clear from Weeds; and the following Spring the Plants will come up, when they ſhould be frequently refreſh'd with Water, and conſtantly kept clean from Weeds; the Autumn following they may be planted out into Nurſery-beds, about five or ſix Inches aſunder, where they may remain until they have Strength enough to flower, when they ſhould be removed into the Borders of the Flower-Garden, placing them in the middle Line among Plants of large Growth, allowing them Room, otherwiſe they will ſpread over whatever Plants are near them.

Theſe Plants flower the Begining of *June*, and if the Seaſon be moderate they will continue in Beauty a long Time: This, together with their being hardy Plants, which require little Culture, renders them worthy of a Place in every good Flower-Garden; and their Flowers are very proper to intermix with others for Baſons to adorn Halls, Chimnies, *&c.* in the Summer Time.

THAPSIA; The Deadly Carrot.

There are ſeveral *Species* of this Plant, which are kept in Botanick Gardens, but as they are Plants of little Beauty, ſo it is not worth while to enumerate them in this Place; but whoever has a Mind to propagate them, may do it in the Manner directed for *Smyrneum*; which ſee.

THLASPI; Mithridate Muſtard.

The *Characters* are;

The Flower conſiſts of four Leaves, which are plac'd in Form of a Croſs; out of whoſe Cup riſes the Pointal, which afterward becomes a ſmooth, roundiſh Fruit, having commonly a leafy Border, and ſlit on the upper Side, divided into two Cells by an intermediate Partition plac'd obliquely with reſpect to the Valves, and furniſh'd with ſmooth, roundiſh Seeds. To theſe Marks muſt be added, the undivided Leaves which diſtinguiſh it from Creſſes.

The *Species* are;

1. THLASPI; *arvenſe, ſiliquis latis. C. B. P.* Field Mithridate Muſtard, with broad Pods.

2. THLASPI; *montanum, ſempervirens. C. B. P.* Mountain evergreen Mithridate Muſtard.

3. THLASPI; *Creticum quibuſdam, flore rubente & albo. J. B.* Candy Mithridate Muſtard, with a reddiſh and white Flower, *commonly called* Candy Tuft.

4. THLAPSI; *umbellatum, arvenſe amarum. J. B.* The bitter Field umbellated Mithridate Muſtard.

5. Thlapsi; *Roſa de Hierico dictum. Mor. Hiſt.* Mithridate Muſtard, *call'd* The Roſe of Jericho.

The firſt Sort is ſometimes found wild in *England*, but not near *London*. This is the Sort which the College of Phyſicians have order'd the Seeds to be us'd in ſome of the grand Medicines of the Shops; tho' the Seeds of ſeveral other Plants are commonly ſubſtituted inſtead of it, becauſe the Seeds of this Sort are not very common in *London*; but the Plants might be eaſily cultivated in ſuch Plenty, as to furniſh the Town with the right Sort, the Plant being extream hardy, and requires no other Culture but to ſow the Seeds in *February* upon an open Spot of Ground; and when the Plants are come up, they muſt be conſtantly clear'd from Weeds: In *June* they will flower, and the Seeds will ripen ſoon after; when the Plants do always periſh, being annual.

The other Sorts are commonly cultivated in Flower-Gardens, where formerly they were ſown for Summer Edgings to Borders; but as they are apt to grow too rank for that Purpoſe, ſo the better Way is to ſow the Seeds in ſmall Patches in the Middle of the Borders between the taller Flowers; and when the Plants are come up, they ſhould be thin'd, and kept clear from Weeds, which will cauſe them to flower much ſtronger than if they are drawn up weak.

Theſe Plants do flower in *June* and *July*, and their Seeds do ripen ſoon after: But in order to have a Succeſſion of theſe and other ſmall annual Flowers, many Perſons do ſow them at two or three different Seaſons, *viz.* in *March*, *April* and *May*; by which Means they continue them until the Froſt comes in Autumn; but thoſe Seeds which are ſown late in the Spring, ſhould be carefully water'd in dry Weather, otherwiſe they ſeldom grow.

The red and white Candy Tufts, do vary ſo as not to be kept ſeparate; the Seeds of the Red producing ſome white Flowers, and thoſe of the White ſome with red ones; but of late, the *bitter umbellated Sort* has been cultivated in Gardens, and the Seeds ſold in the Shops, by the Name of *White Candy Tuft*, tho', in reality, it is a different Plant: However, as this Sort produces beautiful white Flowers, it ſhould have a Place in the Borders of the Flower-Garden for the Sake of Variety.

The *Roſe* of *Jericho* is a Plant of no great Beauty or Uſe, ſo is ſeldom cultivated except in Botanick Gardens. This requires the ſame Culture as the former Sorts, and is alſo an annual Plant.

THLASPIDIUM; Baſtard Mithridate Muſtard.

The *Characters* are;

The Flower conſiſts of four Leaves, which are plac'd in Form of a Croſs, out of whoſe Cup riſes the Pointal, which afterwards becomes a double, ſmooth Fruit, compos'd of two Parts, that are ſeparated by an intermediate Partition, each of which ſwells with a red Seed, which is generally flat and oblong.

The *Species* are;

1. Thlaspidium; *fruticoſum, leucoii folio, ſemperflorens. Tourn.* Shrubby *Thlaſpidium*, with a Wall-flower Leaf, and always flowering, *commonly call'd*, The Candy Tuft-tree.

2. Thlaspidium; *fruticoſum, leucoii folio variegato, ſemperflorens. Tourn.* The ſtrip'd Candy-Tuft-tree; *vulgò*.

There are ſeveral other *Species* of this Plant which are preſerv'd in curious Botanick Gardens, moſt of which are annual, and have little Beauty in their Flowers, therefore I ſhall not enumerate them in this Place, ſince they are rarely cultivated in Flower-Gardens.

The firſt of theſe Plants here mention'd is pretty common in the Gardens near *London*, where it is preſerv'd in Green-houſes with other Exotick Plants for the Beauty of its Flowers, which are commonly continu'd throughout the whole Year, making a very beautiful Figure in the Green-houſe at ſuch Seaſons when few other Plants are in Flower.

This Plant may be propagated by planting either Cuttings or Slips during any of the Summer Months, in Pots fill'd with freſh, light Earth, and plac'd under a Frame, obſerving to water and ſhade them until they have taken Root, after which they may be expos'd to the open Air, and when they have gotten ſtrong Roots, they may be each tranſplanted into a ſeparate Pot fill'd with light, freſh Earth, and may be plac'd amongſt other hardy Exotick Plants in the open Air in Summer; but in Winter they muſt be ſcreen'd from ſevere Froſt, tho' in mild Weather they ſhould have as much free Air as poſſible.

But altho' theſe Plants are generally preſerv'd in Pots, and plac'd in a Green-houſe in Winter, yet after they have acquir'd Strength, they may be planted in warm, dry Borders; where, if the Soil be freſh, and not too rich, they will endure the Cold of our ordinary Winters very well without any Covering: And the Plants thus treated will flower much better than thoſe kept in Pots.

The ſtrip'd Sort is propagated as the plain, and muſt be treated in the ſame Manner, but being ſomewhat tenderer, muſt be conſtantly ſhelter'd in Winter, otherwiſe it will be deſtroy'd in a ſmall Froſt.

THISTLE; *vide* Carduus.

THORN-APPLE; *vide* Stramonium.

THORN, the Glaſtenbury; *vide* Meſpilus.

THUYA; The Arbor Vitæ, *vulgô*.

The *Characters* are;

The Leaves are ever-green, ſquamous, and compreſs'd, having ſmall, oblong, ſquamous Cones growing upon the Backſides, in which the Seeds are contained.

The *Species* are;

1. Thuya; *Theophraſti. C. B. P.* The Arbor Vitæ, *or* Tree of Life.
2. Thuya; *Theophraſti, folio variegato.* The ſtrip'd Arbor Vitæ, *or* Tree of Life.

The firſt Sort was formerly in greater Eſteem than at preſent in the *Engliſh* Gardens; it is commonly rais'd in the Nurſeries near *London*, where their Heads are ſheered into a conical Figure; but ſince that low Taſte of Gardening, in crowding vaſt Quantities of clipp'd Plants into Gardens, is juſtly exploded, theſe Trees do not meet with ſo good Reception as formerly: But notwithſtanding this, there may be ſome of them planted in Gardens to great Advantage, if they are placed in Wilderneſſes, or Clumps of ever-green Trees, where theſe ſhould be planted with other Sorts which are nearly of the ſame Growth; and in ſuch Plantations the dull, heavy, green Colour of theſe Leaves, will be very uſeful in adding to the Luſtre of thoſe which are of a more lively Green, and make a fine Variety.

The ſtrip'd Sort is preſerved by ſome who are curious in collecting ſuch Varieties, but there is little Beauty in it.

Theſe Trees may be propagated by laying down their tender Branches in the Spring of the Year, obſerving to ſlit 'em at a Joint, (as is commonly practis'd for Carnations) as alſo to water 'em in dry Weather, and keep 'em conſtantly clear from Weeds: If theſe Things be duly obſerved, the Layers will be rooted by the Spring following, at which Time they may be taken off, and tranſplanted into a Nurſery in Rows three Feet aſunder, and the Plants eighteen Inches Diſtance in the Rows; obſerving to lay a little Mulch upon the Surface of the Ground about their Roots, to prevent the Wind from drying it, and in dry Weather they ſhould be often refreſh'd with Water, until they have taken Root, after which they muſt be conſtantly kept clear from Weeds, and the Ground dug every Spring between the Rows, that their Roots may extend themſelves on every Side. In this Nurſery they may remain five or ſix Years, and may then be tranſplanted where they are to remain for good. The beſt Seaſon to remove theſe Trees is about the Beginning of *April*, juſt before they ſhoot.

Theſe Trees may alſo be propagated by Slips, which ſhould be planted on a moiſt Soil in *April*, and if ſhaded in very hot, dry Weather, moſt of 'em will take Root, after which they muſt be treated as hath been directed for the Layers.

The Leaves of this Tree being bruiſed between the Fingers, emit a ſtrong Scent, ſomewhat like Ointment; and I have been inform'd, that ſome Perſons do make an Ointment thereof, which is eſteem'd excellent for freſh Wounds. The Wood of this Tree is greatly eſteem'd by the Turners, for making Bowls, Boxes, *&c.* But as the Tree is ſlow of Growth, and ſeldom arrives to any great Magnitude in this Country, (rarely growing above twenty Feet high), ſo it is not worth cultivating for its Timber.

THYMELÆA; Spurge Laurel, *or* Mezereon.

The *Characters* are;

The Flower conſiſts of one Leaf, is for the moſt part Funnel-ſhap'd, and cut into four Segments, from whoſe Center riſes the Pointal, which afterwards becomes an oval Fruit which is in ſome full of Juice, but in others is dry, in each of which is contained one oblong Seed.

The *Species* are;

1. THYMELÆA; *Laurifolia, ſempervirens, ſeu Laureola Mas. Tourn.* The Spurge, *or* Dwarf Laurel.
2. THYMELÆA; *Laurifolia, ſempervirens, foliis variegatis.* The ſtrip'd Spurge Laurel.
3. THYMELÆA; *laurifolio deciduo, ſive Laureola fœmina. Tourn.* The common Mezereon.
4. THYMELÆA; *laurifolio diciduo, flore albido, fructu flaveſcente. Tourn.* The Mezereon with white Flowers and yellowiſh Fruit.
5. THYMELÆA; *laurifolio deciduo, flore rubro.* The Mezereon with red Flowers.
6. THYMELÆA; *laurifolio deciduo, foliis ex luteo variegatis.* The common Mezereon with ſtrip'd Leaves.

The firſt of theſe Plants is found wild in Woods and other ſhady Places in divers Parts of *England*, but is often cultivated in Gardens for Variety; where, if it is planted in Wilderneſſes or ſhady Walks, it will thrive very well; and being an Ever-green, and producing its Flowers in Winter, when few other Plants do flower, makes it the more acceptable. The ſecond Sort is a Variety of the firſt, which is preſerved for the Beauty of its ſtrip'd Leaves.

Both theſe Plants may be propagated by Suckers taken from the old Plants, or by Layers, which ſhould be taken off in Autumn, and planted in a ſtrong Soil and ſhady Situation, where, after they have taken Root, they will require little farther Care.

The ſeveral Sorts of *Mezereon* are propagated by ſowing their Seeds, the beſt Seaſon for which is in *Auguſt*, ſoon after they are ripe, when they begin to fall from the Trees: Theſe ſhould be ſown upon an Eaſt Border, where they may have only the Morning Sun, and cover'd about half an Inch with freſh Earth; in the Spring the Plants will appear, when they muſt be carefully clear'd from Weeds, and in dry Weather ſhould be often watered, which will greatly promote their Growth. In this Border they may remain two Years, by which Time they will be ſtrong enough to tranſplant; when there ſhould be a Spot of ſtrong freſh Earth prepared for them, into which they ſhould be planted in Autumn, in Rows three Feet diſtance, and the Plants eighteen Inches aſunder in the Rows, treating 'em afterwards in the uſual Manner with other Kinds of Shrubs, while in this Nurſery; and when they are large enough to plant out for good, they may be taken up in Autumn, with a Ball of Earth to the Root of each Plant, and placed where they are to remain, which ſhould be in a ſtrong, moiſt Soil, and a ſhady Situation, where they will thrive and flower extreamly well.

Theſe Plants are great Ornaments to a Garden early in the Spring, before other Things are in flower, for if the Seaſon is mild they often flower in *January*, but in *February* they are always in Perfection. They ſeldom grow to be more than five or ſix Feet high in *England*, ſo ſhould be planted among other Shrubs of the ſame Growth.

The Sort with ſtrip'd Leaves may be propagated by budding or inarching it upon the plain Sort, becauſe the Seeds will not produce ſtrip'd Plants.

THYMUS; Thyme.

The *Characters* are;

It hath a labiated Flower, conſiſting of one Leaf, whoſe Upper-lip is erect, and generally ſplit in two, and the Under-lip is divided into three Parts; out of the Flower-cup ariſes the Pointal, accompany'd by four Embryo's, which afterwards become ſo many Seeds, inclos'd in a Husk, which was before the Flower-cup. To theſe Marks muſt be added, hard ligneous Stalks, and the Flowers gather'd into Heads.

The *Species* are;

1. THYMUS; *vulgaris, folio latiore. C. B. P.* Common broad-leav'd *Thyme*.
2. THYMUS; *vulgaris, folio tenuiore. C. B. P.* Common narrow-leav'd *Thyme*.
3. THYMUS; *vulgaris, folio latiore variegato.* Broad-leav'd ſtrip'd *Thyme*.
4. THYMUS; *capitatus, qui Dioſcoridis. C. B. P.* The true *Thyme* of the Antients.

There are ſeveral other *Species* of *Thyme*, which are preſerved in Botanick Gardens for Variety; but as they are ſeldom cultivated for Uſe, ſo I ſhall not enumerate them in this Place. The Sort with broad Leaves is the moſt common in *England*; this is cultivated in the Kitchen-Gardens as a Soup Herb, and alſo for medicinal Uſe. The next two Sorts are preſerved in many Gardens for Variety, being equally as good as the firſt for Uſe: But the fourth Sort is leſs common in *England* than either of the former.

Theſe Plants may be propagated either by Seeds or parting their Roots; the Seaſon for either is in *March*. If it is done by ſowing the Seeds, it ſhould be done upon a Bed of light Earth, obſerving not to bury the Seeds too deep, which will cauſe 'em to rot: When the Plants are come up they ſhould be carefully clear'd from Weeds, and if the Spring ſhould prove dry, if they are water'd twice a Week it will greatly promote their Growth; and in *June* the Plants ſhould be thinned, leaving 'em about ſix Inches aſunder each Way, that they may have Room to ſpread, and thoſe Plants which are drawn out may be tranſplanted into freſh Beds at the ſame Diſtance, obſerving to water them until they have taken Root, after which they will require no farther Care, but to keep 'em clear from Weeds, and in the Winter following they may be drawn up for Uſe.

But if theſe Plants are propagated by parting their Roots, the old Plants ſhould be taken up about the latter End of *March*, and ſlipt into as many Parts as can be taken off with Root; theſe ſhould be tranſplanted into Beds of freſh light Earth, at ſix or eight Inches diſtance, obſerving if the Seaſon is dry to water them until they have taken Root, after which they muſt be duly weeded, and they will thrive, and ſoon be fit for Uſe.

In order to ſave Seeds of theſe Plants, ſome of the old Roots ſhould remain unremoved in the Place where they were ſown the preceding Year; theſe will flower in *June*, and in *July* the Seed will ripen, which muſt be taken as ſoon as it is ripe, and beat out, otherwiſe the firſt Rain will waſh it all out of the Husks.

Theſe Plants do root greatly in the Ground, and thereby draw out the Goodneſs of a Soil ſooner than moſt other Plants; ſo that whatever is ſown or planted upon a Spot of Ground whereon *Thyme* grew the preceding Year, will ſeldom thrive, unleſs the Ground be trench'd deeper than the *Thyme* rooted.

THYME THE LEMON; *vide* Serpillum.

THYME THE MASTICK; *vide* Maſtichina.

TILIA; The Lime, *or* Linden-Tree.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves, which are placed orbicularly, and do expand in Form of a Roſe, having a long, narrow Leaf, growing to the Foot-ſtalk of each Cluſter of Flowers, from whoſe Cup riſes the Pointal, which afterwards becomes a teſticulated Fruit, conſiſting of one Capſule, containing an oblong Seed in each.

The *Species* are;

1. Tilia; *fœmina, folio majore.* C. B. P. The common or broad-leav'd Lime-tree.

2. Tilia; *fœmina, folio minore.* C. B. P. The ſmall-leav'd Lime-tree.

3. Tilia; *foliis molliter hirſutis, viminibus rubris, fructu tetragono.*

Raii Syn. The red-twig'd Lime-tree.

4. Tilia; *Caroliniana, folio longius mucronoto.* The Carolina Lime-tree.

5. Tilia; *fœmina, folio majore variegato.* The ſtrip'd-leav'd Lime-tree.

The three firſt-mention'd Trees are very common in *England,* being cultivated in moſt Nurſeries, but the *Carolina* Sort is not at preſent very common; this was ſent from *Carolina* by Mr. *Mark Catesby,* in the Year 1726. but as yet there does not appear any conſiderable Difference from the common Sort. That with ſtrip'd Leaves is preſerv'd by ſome for the Sake of Variety, but there is no great Beauty in it.

All theſe Trees are eaſily propagated by Layers, which in one Year will take good Root, and may then be taken off and planted in a Nurſery, at four Feet diſtance Row from Row, and two Feet aſunder in the Rows; the beſt Time to lay 'em down and to remove 'em is at *Michaelmas,* when their Leaves begin to fall, that they may take Root before the Froſt comes on, tho' they may be tranſplanted any time from *September* to *March* in open Weather; but if the Soil is dry, it is much the better Way to remove 'em in Autumn, becauſe it will ſave a great Expence in watering them, if the Spring ſhould prove dry. In this Nurſery they may remain four or five Years, during which Time the Ground ſhould be dug every Spring, and conſtantly kept clear from Weeds; and the large Side-ſhoots pruned off, to cauſe 'em to advance in Height; but the ſmall Twigs muſt not be pruned off from the Stems, becauſe theſe are abſolutely neceſſary to detain the Sap, for the Augmentation of their Trunks, which are apt to ſhoot up too ſlender, when they are entirely diveſted of all their lateral Twigs. If the Soil in which they are planted be a fat Loam, they will make a prodigious Progreſs in their Growth, ſo that in five Years time they will be fit to tranſplant out where they are to remain.

Theſe Trees were a few Years ſince greatly eſteem'd for planting Walks and Avenues near Habitations, becauſe in a few Years they would afford a pleaſant Shade, and might be removed, when grown to a large Stature, without Hazard, ſo that a Perſon might enjoy the Pleaſure of 'em in a ſhort Time: But of late they are much leſs valued, on account of their Leaves decaying early in Autumn, (eſpecially if the Soil be dry in which they are planted) ſo that many times they are almoſt deſtitute of Leaves by the Beginning of *September,* whereas the *Elm* continues in Beauty a full Month longer, and the Wood of the latter being much preferable to that of the former, has introduced theſe Trees inſtead of *Limes* in moſt of the modern Plantations.

The Timber of the *Lime-tree* is uſed by the *Carvers,* it being a ſoft light Wood; as alſo by Architects for framing the Models of their Buildings; the *Turners* do alſo uſe it for making light Bowls, Diſhes, *&c.* but it is too ſoft for any ſtrong Purpoſes.

Theſe Trees will continue ſound a great Number of Years, and if planted in a good loamy Soil, will grow to a conſiderable Bulk: I have meaſur'd one of theſe Trees which was near ten Yards in Girt two Feet above the Ground, and was then in a very thriving Condition; and Sir *Thomas Brown* mentions one of theſe Trees which grew in *Norfolk*, that was ſixteen Yards in Circuit a Foot and half above-ground, in Height thirty Yards, and in the leaſt Part of the Trunk it was eight Yards and an half.

TINUS: Laurus Tinus, *vulgò*.

The *Characters* are;

The Flowers grow in Cluſters, and conſiſt of one Leaf, which is divided into five Parts toward the Top; theſe are ſucceeded by ſmall Fruit, ſhap'd ſomewhat like an Olive, but are umbilicated, each containing one Pear-ſhap'd Seed.

The *Species* are;

1. TINUS; *prior. Cluſ. Hiſt.* The Baſtard ſhining-leav'd *Laurus Tinus*, vulgò.
2. TINUS; II. *Cluſ. Hiſt.* The rough-leav'd *Laurus Tinus*, vulgò.
3. TINUS; III. *Cluſ. Hiſt.* The ſmall-leav'd *Laurus Tinus*, vulgò.
4. TINUS; *prior Cluſii, folio atro-viridi ſplendente.* The ſhining-leav'd *Laurus Tinus*, vulgò.
5. TINUS; *prior Cluſii, foliis ex albo variegatis.* The ſtrip'd ſhining-leav'd *Laurus Tinus.*
6. TINUS; II. *Cluſii, foliis ex luteo variegatis.* The ſtrip'd rough-leav'd *Laurus Tinus.*

Theſe Plants are greatly propagated in the Gardens near *London* for their Beauty, the Leaves always remaining green, and their Flowers are produced in great Plenty in the Winter Seaſon, when few other Shrubs do flower.

Theſe Plants were a few Years ſince preſerved in Pots and Tubs, and placed in the Green-houſe in Winter, with *Oranges*, *Myrtles*, and other exotick Trees; but of late Years they have been planted in the open Ground, where they reſiſt the Cold of our ordinary Winters very well, and are rarely injured, except in very ſevere Froſts, and then they are ſeldom deſtroy'd, though their Heads may be kill'd (as was the Caſe with many of theſe Trees in the Year 1728.) yet thoſe which were left undiſturb'd, ſhot out freſh again the following Summer, and have ſince made good Plants; which ſhould caution People from rooting out Plants too ſoon, when they may ſeem to be kill'd by Froſt.

Theſe Plants may be propagated by laying down their tender Shoots in the Spring, which if kept clear from Weeds, and duly water'd in dry Weather, will take Root by the ſucceeding Spring, when they ſhould be taken off and tranſplanted into a mellow, loamy Soil, (but not too wet) at three Feet diſtance Row from Row, and eighteen Inches aſunder in the Rows, obſerving to lay ſome Mulch upon the Surface of the Ground about their Roots, and in dry Weather to refreſh 'em with Water until they have taken Root.

There ſhould be alſo ſome ſtrait Stakes fix'd down by the Side of each Plant, to which they ſhould be faſten'd, in order to render their Stems ſtrait, otherwiſe they will be crooked and unſightly. But it is not proper to have theſe Plants more than two Feet high in clear Stems, becauſe when their Heads are advanced above Sight, the Beauty of the Plants are loſt, and they are in greater Danger of being deſtroy'd in bad Weather: Therefore, when their Stems are two Feet high, their upright Shoots ſhould be ſtopp'd, in order to force out lateral Branches, which may be ſo prun'd in the growing Seaſon, as to form 'em into regular Heads; but this ſhould not be done with Sheers (as is the common Practice, whereby their Leaves are cut, and render'd very unſightly), but rather ſkilfully pruned with a Knife, allowing their Branches a proportionable Diſtance to the Breadth of their Leaves, which will be cloſe enough to render them beautiful, and at the ſame Time will encourage their Flowering: For when they are continually clipp'd, their Branches are very weak, and do often decay in the Middle, and their Flowers are never ſo large, nor produc'd in ſo great Plenty as when they have a greater Diſtance allow'd to their Shoots.

In this Nurſery the Plants may remain four or five Years, during which time they ſhould be carefully clear'd from Weeds, and the Ground dug every Spring; in doing of which their Roots ſhould be carefully cut round, to cauſe 'em to produce more Fibres, whereby they may be removed with greater Safety, becauſe the Earth will be the better ſupported by their Roots. The beſt Time to tranſplant them is about the Beginning of *April*, as hath been directed for moſt Sorts of *Evergreens*, that being the Seaſon they begin to ſhoot.

Theſe Shrubs are very ornamental, when planted in the lower Part of Clumps, and other Plantations of *Evergreens*, if they are mix'd with other Plants of the ſame Growth; and in theſe Plantations they will not be ſo liable to ſuffer by Froſt, becauſe their Stems will be defended by the neighbouring Plants.

There are ſome who make Hedges of theſe Plants, but they are by no means proper for that Purpoſe, becauſe their Leaves are large, which occaſions their Branches to be produced at a farther Diſtance, and theſe when cut do appear very unſightly; beſides, by the frequent cutting of them, it prevents their flowering, ſo that the greateſt Beauty of the Plants is loſt; for they ſhould never be pruned after the Beginning of *May*, unleſs ſome very luxuriant Shoots are produced, which grow greatly out of Order; theſe may be ſhorten'd, or entirely diſplaced, according as the Plants may require; and this one Pruning every Spring will be ſufficient to keep 'em conſtantly in Order, without injuring their Flowering, which ſhould always be avoided.

TITHYMALOIDES; Baſtard Spurge.

The *Characters* are;

The Flower conſiſts of one Leaf, and is in Shape ſomewhat like a Slipper; whoſe Pointal afterwards becomes a tricapſular Fruit like that of Spurge.

The *Species* are;

1. TITHYMALOIDES; *fruteſcens, folio Myrti ampliſſimo. Tourn.* The American, ſhrubby, Laurel-leav'd Spurge, *vulgo*.
2. TITHYMALOIDES; *fruteſcens, foliis nerii. Plum.* Shrubby Baſtard Spurge with an Oleander Leaf.

Theſe Plants are very common in the warm Parts of *America*, where the firſt is known by the Name of *Poiſon-weed*, under which Appellation I received it from *Barbados*; this Sort is now pretty common in the Gardens of thoſe who are curious in preſerving tender exotick Plants, but the ſecond Sort is yet very rare in the *Engliſh* Gardens.

They are both propagated by Cuttings, which may be taken from the Plants during any of the Summer Months, and after having lain in a dry Place for a Fortnight or three Weeks, until the wounded

Part be healed over, they ſhould be planted into ſmall Pots, fill'd with light, ſandy Earth, mix'd with Lime-rubbiſh, and then plunged into a Hot-bed of Tanners-bark, obſerving now and then to refreſh them gently with Moiſture; but they ſhould never receive much Wet, which will rot them.

After they have taken Root they may have a greater Share of Air, by raiſing the Glaſſes, but they muſt never be intirely expos'd to the open Air: In this Bed they may remain until the Beginning of *October*, when they muſt be remov'd into the Stove, and placed with the *Melon* and *Torch-Thiſtle*, in a warm dry Situation, and during the Winter Seaſon they ſhould have very little Water, which if given in Plenty, ſeldom fails to rot 'em. In the Spring theſe Plants ſhould be again placed into a Bark-bed, which will greatly promote their Growth, and will cauſe 'em to produce Flowers, which they ſeldom do when kept dry upon Shelves in the Stove, nor will they make any conſiderable Progreſs in ſuch a Situation.

Theſe Plants are preſerved for their odd Appearance amongſt other ſucculent Plants, their Leaves being very large, thick, and full of a milky acrid Juice.

TITHYMALUS; Spurge.

The *Characters* are;

The Flower conſiſts of one Leaf, which is of the globous, Bell-ſhape, cut into ſeveral Moon-ſhap'd Segments, and encompaſs'd by two little Leaves, which ſeem to perform the Office of a Flower-cup; the Pointal, which is for the moſt part triangular, riſes from the Bottom of the Flower, and afterwards becomes a Fruit of the ſame Shape, divided into three ſeminal Cells, in each of which is contain'd one oblong Seed. To theſe Notes ſhould be added, It has a milky Juice abounding in every Part of the Plant.

The *Species* are;

1. TITHYMALUS; *latifolius, cataputia dictus. H. L.* Broad-leav'd Spurge, *called* Cataputia.

2. TITHYMALUS; *characias, amygdaloides. C. B. P.* Wood Spurge with Almond-like Leaves.

3. TITHYMALUS; *characias, amygdaloides, foliis eleganter variegatis. Flor. Bat.* Wood Spurge with beautiful ſtrip'd Leaves.

4. TITHYMALUS; *maritimus. C. B. P.* Sea Spurge.

5. TITHYMALUS; *myrſinites, latifolius. C. B. P.* Broad Myrtle-leav'd Spurge.

6. TITHYMALUS; *paluſtris, fruticoſus. C. B. P.* Shrubby Marſh Spurge, *commonly called*, the Greater Eſula of the Shops.

7. TITHYMALUS; *foliis pini, fortè Dioſcoridis pityuſa. C. B. P.* Pine-leav'd Spurge, *called* the Leſſer Eſula of the Shops.

8. TITHYMALUS; *Indicus fruteſcens. Raii Hiſt.* Indian ſhrubby Spurge.

9. TITHYMALUS; *Indicus, vimineus, penitus aphyllos. Boerh. Ind.* Indian Spurge with ſlender ſtraggling Branches without Leaves.

10. TITHYMALUS; *arboreus. Alpin.* Tree Spurge with Myrtle Leaves.

11. TITHYMALUS; *Creticus, characias, anguſtifolius, villoſus & incanus. T. Cor.* Woody Spurge of Candia, with narrow, hairy, and hoary Leaves.

There is a great Number of *Species* of leſs Note, which are ſeldom cultivated in Gardens, ſo I ſhall not enumerate them here, thoſe already mention'd being the moſt valuable Sorts.

The firſt is a biennial Plant, which will ſcatter its Seeds, and the Plants will come up without any Care, which will flower and ſeed the following Summer, after which the Plants will die; theſe Plants come up much better when the Seeds fall of themſelves, than if ſown with great Care, nor will they bear removing, unleſs it be done while they are young; becauſe they generally ſend forth a Tap-root, which is often broken by tranſplanting, and thereby the Plant deſtroy'd. This is order'd by the *College of Phyſicians* to be uſed in Medicine, under the Title of *Cataputia minor*, for which Reaſon it is preſerv'd in ſome Gardens, though there is no great Beauty in the Plant.

The ſecond Sort is found wild in Woods and other ſhady Places in divers Parts of *England*, but is worthy of a Place in ſmall Wilderneſs Quarters, or in other ſhady Plantations, where it will thrive very well, and in the Spring will produce great Tufts of Flowers, which although not very beautiful, yet are of a ſingular Figure and Colour, and will add to the Variety of the Place. Theſe Plants may be taken out of the Woods in Autumn, and tranſplanted into the Places where they are deſign'd, in which, if they are once eſtabliſh'd, they will ſow their Seeds, and thereby be continued; but if they are not placed under the Shelter and Shadow of Trees, they will not thrive ſo well.

The third Sort is a Variety of the ſecond; the Leaves of this Kind are beautifully ſtrip'd, ſo as to appear of three Colours: This may be propagated by Cuttings, which ſhould be planted in Pots, filled with light ſandy Earth, and placed in the Shade until they have taken Root, after which they may be placed amongſt other curious Plants, where they may be ſcreen'd from the Violence of the Sun in Summer, and in Winter they muſt be ſhelter'd under a Frame from hard Froſt, which will deſtroy them, but they muſt have the free Air in mild Weather, and not too much Wet in Winter.

The fourth Sort is found wild upon the Sea Coaſts in ſeveral Places in *England*, from whence it has been tranſplanted into ſeveral Gardens: This may be propagated by ſowing the Seeds, or by Cuttings, which muſt be planted in the Spring, upon a gravelly poor Soil, in which this Plant will endure the Cold of our ordinary Winters very well, but in very ſevere Froſts it is often deſtroy'd. This is preſerved in ſome Gardens, more or the Sake of its Variety than Beauty.

The fifth Sort may alſo be propagated either by ſowing its Seeds or planting Cuttings, in the ſame manner as the former, but muſt have a dry Soil, and a warm Situation, otherwiſe the Cold will deſtroy it in Winter. This Plant trails upon the Ground, ſo ſhould be planted at a Diſtance from other Plants, becauſe if it be overhung by 'em it will not thrive, and the Branches of this will many times extend themſelves two Feet from the Root, ſo that if it has not Room, they will rot and die away.

The ſixth Sort grows wild in marſhy Places in *France*, *Italy*, and *Germany*, but in *England* it is preſerved in ſome curious Botanick Gardens, it being an officinal Plant. This may be propagated by parting the Roots, and planting Cuttings in the Spring, which muſt be done in a light Soil and an open Situation, where it will grow four or

Feet high, and become very by; ſo that the Plants muſt owed at leaſt two Feet Room ow, otherwiſe they will over- each other, or whatever Plants near 'em. There is not much :y in this Sort, but as it is a cinal Plant, it ſhould have a in Phyſick Gardens.

ıe ſeventh Sort is a very har- lant, and propagates itſelf by reeping Roots, ſo that if it be :onfined in Pots, it will ſpread the Ground where-ever it is ed, ſo as not to be eaſily kept in Bounds. This being a me- al Plant, ſhould alſo have a : in Phyſick Gardens, but there ɔt much Beauty in it to re- mend it to the Curious.

he eighth, ninth and tenth ; are tender Plants, which e from warm Countries; and *gland* are preſerved with great in Stoves, amongſt other cu- ; ſucculent Plants. Theſe are agated by Cuttings, which ld be cut from the old Plants Joint, and laid in a dry Part ıe Stove for a Fortnight, that wounded Part may heal over; they ſhould be planted in ſmall , filled with light ſandy Earth, 'd with Lime-rubbiſh, and plun- into a Hot-bed of Tanners-bark, re they ſhould remain until have taken Root, after which ſhould be inured to the Air by rees, and then be removed in- he Stove, where they muſt con- tly be kept, for they are too ler to be expos'd abroad in the t of Summer; therefore they ıld be placed near the Glaſſes of Stove in Summer, where they have Air in very hot Weather, they muſt not have much t, being very full of Moiſture, ſubject to rot if over watered. In Winter they muſt be ſet in a warm Part of the Stove, and ſhould have very little Wet during that Seaſon: With this Management theſe Plants will thrive and grow very large, but they ſeldom produce Flowers in this Country.

The eleventh Sort was found by Monſieur *Tournefort* in the *Levant*, and by him brought into *Europe* by the Name here given to it, though many curious Botaniſts are not ſatisfied how it differs from the *Tithymalus characias rubens peregrinus* of *Caſpar Bauhinus*. This has a great deal of the Appearance of our *Wood Spurge*, but the Stalks are redder, and the Flowers are much fairer: It may be propagated by Cuttings, which ſhould be planted in Pots, filled with light ſandy Earth, and in Winter muſt be ſhelter'd, otherwiſe it is apt to periſh with ſevere Cold. In *March* it flowers, at which time it makes a beautiful Appearance, and is worthy of a Place in every good Garden.

TOAD-FLAX; *vide* Linaria.

TOBACCO; *vide* Nicotiana.

TOXICODENDRON; Poiſon-tree; *vulgò.*

The *Characters* are;

The Flower conſiſts of five Leaves, which are placed orbicularly, and expand in Form of a Roſe; out of whoſe Flower cup riſes the Pointal, which afterwards becomes a roundiſh, dry, and for the moſt part, furrowed Fruit, in which is contain'd one compreſs'd Seed.

The *Species* are;

1. Toxicodendron; *triphyllum, glabrum. Tourn.* Three-leav'd ſmooth Poiſon-tree.

2. Toxicodendron; *triphyllum, folio ſinuato pubeſcente. Tourn.* Three-leav'd Poiſon-tree with a ſinuated hairy Leaf.

3. Toxicodendron; *Carolinianum, foliis pinnatis, floribus minimis herbaceis.* Carolina Poiſon Aſh; *vulgò.*

The two firſt *Species* were brought from *Virginia*, many Years ſince, where they grow in great Plenty, as it is probable they do in moſt other Northern Parts of *America.* The firſt Sort ſeldom advances in Height, but the Branches trail upon the Ground, and ſend forth Roots, by which they propagate in great Plenty.

The ſecond Sort will grow upright, and make a Shrub about four or five Feet high, but rarely exceeds that in this Country. This may be propagated by Layers, and is equally as hardy as the former.

The third Sort was rais'd from Seeds, which were ſent from *Carolina* by Mr. *Catesby*. This is ſomewhat tenderer than either of the former, but will endure the Cold of our ordinary Winters very well, eſpecially if it be planted near the Shelter of other Trees.

Theſe Plants are preſerved by the Curious in Botany, for the Sake of Variety, but as there is little Beauty in them, ſo they are not much cultivated in *England.* The Wood of theſe Trees, when burnt, emits a noxious Fume, which will ſuffocate Animals when they are ſhut up in a Room where it is burnt: An Inſtance of this is mention'd in the *Philoſophical Tranſactions* by Dr. *William Sherard*, which was communicated to him in a Letter from *New England* by Mr. *Moore*, in which he mentions ſome People who had cut ſome of this Wood for Fuel, which they were burning, and in a ſhort time they loſt the Uſe of their Limbs and became ſtupid; ſo that if a Neighbour had not accidentally open'd the Door, and ſaw them in that Condition, it is generally believ'd they would ſoon have periſh'd. This ſhould caution People from making uſe of this Wood.

TRAGACANTHA; Goats-thorn.

The *Characters* are;

It hath a papilionaceous Flower, out of whoſe Empalement ariſes the Pointal, which afterwards becomes a bicapſular Pod, fill'd with Kidney-ſhap'd Seeds. To theſe Notes muſt be added, The Leaves grow by Pairs on a middle Rib, which always ends in a Thorn.

The *Species* are;

1. Tragacantha; *Maſſilienſis. J. B.* Goats-Thorn of Marſeilles.

2. Tragacantha; *Cretica, incana, flore parvo, lineis purpureis ſtriato. T. Cor.* Hoary Goats-thorn of Crete, with a ſmall Flower ſtrip'd with purple Lines.

3. Tragacantha; *humilis Balearica, foliis parvis vix incanis, flore albo. Salvad.* Low Balearic Goats-thorn, with ſmall Leaves and a white Flower.

There are many other *Species* of this Plant which grow wild in the Iſlands of the *Archipelago*; but thoſe here mention'd are all the Sorts I have yet ſeen cultivated in the *Engliſh* Gardens.

Theſe Plants may be propagated either from Seeds or by Cuttings, but as they rarely produce Seeds in this Country, ſo the latter Method is only uſed here. The beſt Time for this Work is in *April*, juſt as the Plants begin to ſhoot; at which Time the tender Branches of the Plants ſhould be taken off, and their lower Parts diveſted of the decay'd Leaves; then they ſhould be planted on a very moderate Hot-bed, which ſhould be cover'd with Mats, to ſcreen them from the great Heat of the Sun by Day, and the Cold by Night: Theſe Cuttings ſhould be frequently water'd until they have taken Root; after which they may be expos'd to the open Air, obſerving always to keep them clear from Weeds, and in very dry Weather they muſt be refreſh'd with Water.

On this Bed they may remain until the following Spring, where, if the Winter ſhould be very ſevere, they may be cover'd with Mats, as before, and in *April* they may be tranſplanted out either into Pots fill'd with ſandy, light Earth, or into warm Borders, where, if the Soil be dry, gravelly, and poor, they will endure the ſevereſt Cold of our Climate; but if they are planted in a very rich Soil, they often decay in Winter.

From the ſecond Sort Monſieur *Tournefort* ſays, the Gum *Adragant* or *Dragon* is produc'd in *Crete*; of which he gives the following Relation in his Voyage to the *Levant*: "We had (*ſays he*) the Satisfaction of fully obſerving the Gum *Adragant* on Mount *Ida*. I cannot underſtand how *Bellonius* comes to aſſert ſo poſitively, that there is no ſuch thing in *Candia*: Sure he had not read the firſt Chapter of the ninth Book of *Theophraſtus*'s Hiſtory of Plants. The little *bald Hillocks* about the *Sheepfold* produce much of the *Tragacantha*, and that too a very good Sort. *Bellonius* and *Proſper Alpinus* were doubtleſs acquainted with it; tho' it is hardly poſſible, from their Deſcriptions, to diſtinguiſh it from the other Kinds they make mention of. This Shrub ſpontaneouſly yields the Gum *Adragant* towards the End of *June*, and in the following Months; at which time, the nutritious Juice of this Plant, thicken'd by the Heat, burſts open moſt of the Veſſels wherein it is contain'd. It is not only gather'd in the Heart of the Trunk and Branches, but alſo in the Interſpaces of the Fibres, which are ſpread in the Figure of a Circle like Rays of the Sun. This Juice is coagulated into ſmall Threads, which paſſing through the Bark, iſſue out by little and little, according as they are protruded by the freſh Supplies of Juice ariſing from the Roots. This Subſtance being expos'd to the Air, grows hard, and is form'd either into Lumps, or ſlender Pieces, curl'd and winding in the Nature of Worms, more or leſs long, according as Matter offers. It ſeems as if the Contraction of the Fibres of this Plant contributes to the expreſſing of the Gum. Theſe delicate Fibres, as fine as Flax, being uncover'd, and trodden by the Feet of the Shepherds and Horſes, are by the Heat ſhrivell'd up, and facilitate the Emanation of the extravaſated Juices."

But notwithſtanding what *Tournefort* has ſaid concerning the Gum *Adragant* being produc'd from that particular Species, many Authors are of Opinion, that it is taken from ſeveral other Species, but particularly that of *Marſeilles*, from whence that Gum is often brought into *England*.

TRAGOPOGON; Goats-beard.

The *Characters* are;

It is a Plant with a ſemifloſculous Flower, conſiſting of many half Florets; theſe, with the Embryo's are included in one common many-leav'd Flower-cup, which is not ſcaly as in Scorzonera, *but the Segments are ſtretch'd out above the Florets; the*

Embryo's afterwards become oblong Seeds incloſ'd in Covers or Coats, and have a thick Down like a Beard adhering to them.

The *Species* are;

1. TRAGOPOGON; *pratenſe, luteum, majus. C. B. P.* Greater Meadow Goats-beard, with a yellow Flower, *commonly call'd*, Go-to-Bed-at-Noon.

2. TRAGOPOGON; *purpureo-cæruleum, porri folio quod Artifi; vulgò. C. B. P.* Goats-beard, with a Leaf like Leeks, and a purple blue Flower, *commonly call'd*, Salſſafy *or* Saſſafy.

3. TRAGOPOGON; *alter, gramineo folio, ſuave-rubente flore. Col.* Another Goats-beard, with a graſſy Leaf, and ſoft red Flowers.

There are ſeveral other *Species* of this Plant, which are preſerv'd in ſome curious Botanick Gardens for the Sake of Variety; but as they are not cultivated for Uſe, ſo I ſhall omit enumerating them in this Place.

The firſt Sort here mention'd grows wild in moiſt Meadows in divers Parts of *England*; and in *May*, when the Stems begin to advance, they are by many People gather'd to boil, and are by ſome preferr'd to *Aſparagus*.

The ſecond Sort was formerly more in Eſteem than at preſent: This was brought from *Italy*, and cultivated in Gardens for Kitchen Uſe, the Roots being by ſome People greatly valued; but of late there is but little cultivated for the Markets, tho' ſeveral Gentlemen preſerve it in Gardens to ſupply their Tables.

The third Sort is by ſome preſerv'd for the Variety of its Flowers.

Theſe Plants are propagated from Seeds, which ſhould be ſown in the Spring upon an open Spot of Ground, in Rows about nine or ten Inches diſtant; and when the Plants are come up, they ſhould be hoed out, leaving them about ſix Inches aſunder in the Rows: the Weeds ſhould alſo be carefully hoed down as they are produc'd, otherwiſe they will ſoon over-bear the Plants, and ſpoil them. This is the only Culture they require; and if the Soil be light, and not too dry, they will make large Plants before Winter; at which time the *Salſſafy*, whoſe Roots are the moſt valuable Part, will be fit for Uſe, and may be taken up any time after their Leaves are decay'd; but when they begin to ſhoot again, they will be ſticky, and not fit for Uſe.

The common yellow Sort, whoſe Shoots are preferr'd, will be fit for Uſe in *April* or *May*, according to the Forwardneſs of the Seaſon: The beſt time to cut them is, when their Stems are about four Inches long; for if they ſtand too long, they are never ſo tender as thoſe which are cut while young.

Some People in cultivating theſe Plants, ſow their Seeds in Beds pretty cloſe, and when the Plants come up, they tranſplant them out in Rows at the before-mention'd Diſtance; but as they do always form a Tap-root, which abounds with a milky Juice, ſo when the extream Part of their Roots is broken by tranſplanting, they do ſeldom thrive well afterward; therefore it is by far the better Way to make ſhallow Drills in the Ground, and ſcatter the Seeds therein, as before directed, whereby the Rows will be at a due Diſtance, and there will be nothing more to do than to hoe out the Plants when they are too thick in the Rows, which will be much leſs Trouble than the other Method of tranſplanting, and the Plants will be much larger and fairer.

TRANSPORTATION of PLANTS: In ſending *Plants* from one Country to another, great Regard ſhould be had to the proper Seaſon for doing it: For Example, if a Parcel of *Plants* are to be ſent from a hot Country to a cold one, they ſhould be ſent in the Spring of the Year, that as they come towards the colder Parts, the Seaſon may be advancing, and hereby, if they have ſuffer'd a little in their Paſſage, there will be time to recover them before Winter; whereas thoſe which arrive in Autumn are often loſt in Winter, becauſe they have not time to recover and get Root before the Cold comes on.

On the contrary, thoſe *Plants* which are ſent from a cold Country to a hot one, ſhould always be ſent in Winter, that they may arrive time enough to be rooted before the great Heats come on, otherwiſe they will ſoon periſh.

The beſt Way to pack up *Plants* for a Voyage (if they are ſuch as will not bear to be kept out of the Ground) is, to have ſome handy Boxes with Handles to them, for the more eaſily removing them in bad Weather: Theſe ſhould have Holes bored in their Bottoms to let out the Moiſture, otherwiſe it will rot the Roots of the *Plants*. Over each of theſe Holes ſhould be laid a flat Tile or Oyſter-ſhell, to prevent the Earth from ſtopping them; then they ſhould be fill'd up with Earth, into which the *Plants* ſhould be ſet as cloſe as poſſible to each other, in order to ſave Room (which is abſolutely neceſſary, otherwiſe they will be very troubleſome in the Ship;) and as the only thing intended is, to preſerve them alive, and not to make any Progreſs while on their Paſſage, ſo a ſmall Box will contain many Plants, if rightly planted. The Plants ſhould alſo be plac'd in the Box a Fortnight or three Weeks before they they are put on Board the Ship, that they may be a little ſettled and rooted; and during the Time they are on Board, they ſhould remain, if poſſible, on the Deck, that they may have Air; but in bad Weather they ſhould be cover'd with a Tarpawlin, to guard them againſt the Salt Water, which will deſtroy them if it comes at 'em in any Quantity.

The Water theſe *Plants* ſhould have, while on Board, muſt be proportion'd to the Climate where they come from, and to which they are going: If they come from a hot Country to a cold one, then they ſhould have very little Moiſture, after they have paſſed the Heats; but if they are carry'd from a cold Country to a hot one, they muſt have a greater Share of Moiſture when they come into a warmer Climate, and ſhould be ſhaded in the Day from the violent Heat of the Sun, to which, if they are too much expos'd, it will dry them up and deſtroy them.

But if the *Plants* to be ſent from one Country to another, are ſuch as will live out of the Ground a conſiderable time, as all thoſe which are full of Juice will do; as the *Sedums*, *Ficoides*, *Euphorbiums*, *Cereus's*, &c. then they require no other Care but to pack them up in a cloſe Box, wrapping them up well with *Moſs*, obſerving to place them ſo cloſely that they may not be tumbled about, which will bruiſe them, and that thoſe *Plants* which have Spines may not wound any of the others. The Box alſo ſhould be plac'd where they may receive no Moiſture, and where Rats cannot come to them, otherwiſe they are in Danger of being eaten by thoſe Vermin.

If theſe *Plants* are thus carefully pack'd up, they will do well, tho' they ſhould be two, three, or ſome Sorts, if they are four or five Months on their Paſſage, and will be leſs liable to ſuffer than if planted in Earth, becauſe the Sailors generally kill theſe *Plants* by over-watering them.

There are alſo ſeveral Sorts of Trees which may be pack'd up in Cheſts with Moſs about them, which will bear to be kept out of the Ground two or three Months, provided it be at a Seaſon when they do not grow; as may be ſeen by the *Orange-Trees*, *Jaſmines*, *Capers*, *Olive* and *Pomegranate-Trees*, which are annually brought from *Italy*, and if ſkilfully managed, very few of them miſcarry, notwithſtanding they are many times kept three or four Months out of the Ground.

In ſending Seeds from one Country to another, the great Care to be taken is, to ſecure them from Vermin, and preſerve them dry, otherwiſe they mould and decay. The Method Mr. *Catesby* always obſerv'd was, to put up his Seeds dry into Papers, and then put them into a dry Gourd-ſhell, and ſeal them up; in which Way he ſent ſeveral large Parcels of Seeds from *Carolina* to *England*, which never miſcarry'd. There are ſome Perſons who have directed to put them into Glaſſes, and to ſeal them cloſely down, to keep out the external Air; but from ſeveral Experiments of this kind which I have made, I find Seeds thus cloſely put up will not grow, if they remain ſtopp'd up any conſiderable time, all Seeds requiring ſome Share of Air to preſerve their vegetating Quality: So that where a Perſon has no other Conveniency, they may be put up in a Bag, and hung up in a dry Part of the Ship, or put into a Trunk, where they may be ſafe from Vermin; in which Places they will keep very well.

N. B. It is the ſafeſt Way to bring all Sorts of Seeds in their Pods or Husks in which they grew, provided they are put up dry, becauſe their own Covering will afford them ſome Nouriſhment if the Seeds are not ſeparated from the *Placenta*.

TRIFOLIUM; Trefoil.

The *Characters* are;

It hath a papilionaceous Flower, or reſembles a papilionaceous Flower, for it conſiſts of the Standard; the Wings and the Keel coming out of the Empalement, together with the Pointal, cover'd with its fringed Sheath; it becomes a Capſule, hidden in the Empalement, and full of Seeds, which are for the moſt part ſhap'd like a Kidney, adhering cloſe to the Capſule when ripe. Some of this Genus have Flowers conſiſting of one Leaf, reſembling a papilionaceous Flower, out of whoſe Empalement ariſes the Pointal, which afterward becomes a membranaceous Capſule hidden in the Empalement, and fill'd with Kidney-ſhap'd Seeds. To theſe Notes muſt be added, Leaves growing by Threes, ſeldom by Fours, or Fives, on a common Footſtalk.

The *Species are*;

1. TRIFOLIUM; *purpureum, majus ſativum, pratenſi ſimile.* Raii *Syn.* Greater purple manured *Trefoil, commonly call'd,* Clover.

2. TRIFOLIUM; *pratenſe, purpu-*

reum vulgare. Mor. Hiſt. Common Meadow *Trefoil,* with a purple Flower, *commonly call'd,* Honeyſuckle *Trefoil.*

3. TRIFOLIUM; *pratenſe album. C. B. P.* White Meadow *Trefoil.*

4. TRIFOLIUM; *arvenſe, humile, ſpicatum, ſive Lagopus. C. B. P.* Hare's-foot *Trefoil.*

5. TRIFOLIUM; *fragiferum. Ger. Emac.* Strawberry-*Trefoil.*

6. TRIFOLIUM; *pratenſe luteum, capitulo. Lupuli, vel agrarium. C. B. P.* Hop-*Trefoil.*

7. TRIFOLIUM; *bitumen redolens. C. B. P.* *Trefoil,* ſmelling of Bitumen.

8. TRIFOLIUM; *bitumen redolens, anguſtifolium. Boerh. Ind.* Narrow-leav'd *Trefoil,* ſmelling of Bitumen.

9. TRIFOLIUM; *Africanum, fruticans, flore purpuraſcente. H. Amſt.* African ſhrubby *Trefoil,* with a purpliſh Flower.

The firſt of theſe Plants is greatly cultivated in *England* for feeding of Cattle, and is eſteem'd very profitable, becauſe the great Quantity of Cattle which this Graſs will maintain, does very much inrich all clayey Lands, and prepare them for Corn in two or three Years, which is the Length of Time which this Crop will continue good.

In the Choice of this Seed, that which is of a bright yellowiſh Colour, a little inclining to Brown, ſhould be preferr'd; but that which is Black, ſhould be rejected as good for little.

Ten or twelve Pounds of this Seed will be ſufficient for an Acre of Ground; for if the Plants do not come up pretty thick, it will not be worth ſtanding. The Land in which this Seed is ſown, ſhould be well ploughed, and harrowed very fine, otherwiſe the Seeds will be buried too deep, and thereby loſt.

The beſt time to ſow it is about the Beginning of *Auguſt,* at which time the Autumnal Rains will bring up the Plants in a ſhort time; whereas when the Seeds are ſown in the Spring, if it be done very early, they are many times burſt with Wet and Cold; and if it be done late, they are in Danger of miſcarrying from Drought: Whereas in Autumn, when the Ground has been warm'd by the Summer's Heat, the Rains then falling, do greatly promote the Vegetation of Seeds and Plants.

This Seed ſhould be harrow'd in with Buſhes, for if it be done with a common Harrow, they will be bury'd too deep.

Moſt People have recommended the ſowing of this Seed with ſeveral Sorts of Corn; but if it be ſown at the Seaſon before directed, it will be much better, if ſown alone; for the Corn prevents the Growth of the Plants until it is reaped and taken off the Ground; ſo that one whole Seaſon is loſt, and many times, if there be a great Crop of Corn upon the Ground, it often ſpoils the *Clover,* ſo that it is hardly worth ſtanding; whereas in the Way before directed, the Plants will have good Root before Winter, and in the Spring will come on much faſter than that which was ſown the Spring before under Corn.

About the Middle of *May* this Graſs will be fit to cut, when there ſhould be great Care taken in mixing it, for it will require a great deal more Labour and Time to dry than common Graſs, and will ſhrink into leſs Compaſs; but if it be not too rank, it will make extraordinary rich Food for Cattle. The Time for cutting it is when it begins to flower, for if it ſtands much longer, the lower Part of the Stems will begin to dry, whereby it will make a leſs Quantity of Hay, and that not ſo well flavour'd.

Some People cut three Crops in one Year of this Graſs, but the beſt Way is to cut but one in the Spring, and feed it the remaining Part of the Year, whereby the Land will be enriched, and the Plants will grow much ſtronger.

One Acre of this Graſs will feed as many Cattle as four or five Acres of common Graſs : But great Care ſhould be taken of the Cattle when they are firſt put into it, leſt it burſt them. To prevent which, ſome turn them in for a few Hours only at firſt, and ſo ſtint them as to Quantity, and this by degrees, letting them at firſt be only one Hour in the Middle of the Day, when there is no Moiſture upon the Graſs, and ſo every Day ſuffer them to remain a longer time, until they are fully ſeaſon'd to it: But great Care ſhould be had never to turn them into this Food in wet Weather; or if they have been for ſome time accuſtom'd to this Food, it will be proper to turn them out at Night in wet Weather, and let them have Hay, which will prevent the ill Conſequences of this Food: But there are ſome who give Straw to their Cattle while they are feeding upon this Graſs, to prevent the ill Effects of it; which muſt not be given them in the Field, becauſe they will not eat it where there is Plenty of better Food. There are others who ſow Rye Graſs amongſt their *Clover*, which they let grow together, in order to prevent the ill Conſequences of the Cattle feeding wholly on *Clover*: But this is not a commendable Way, becauſe the Rye Graſs will greatly injure the Clover in its Growth.

Where the Seeds are deſign'd to be ſav'd, the firſt Crop in the Spring ſhould be permitted to ſtand until the Seeds are ripe, which may be known by the Stalks and Heads changing to a brown Colour; then it ſhould be cut in a dry Time: And when it is well dry'd, it may be hous'd until Winter, when the Seeds ſhould be threſh'd out; but if the Seeds are wanted for immediate ſowing, it may be threſh'd out before it be hous'd or ſtack'd, but then it muſt be well dry'd, otherwiſe the Seeds will not quit their Husks.

It has been a great Complaint amongſt the Farmers, that they could not threſh out theſe Seeds without great Labour and Difficulty, which I take to be chiefly owing to their cutting the Spring Crop when it begins to flower and to leave the ſecond Crop for Seed, which ripens ſo late in Autumn, that there is not Heat enough to dry the Husks ſufficiently, whereby they are tough, and the Seeds render'd difficult to get out, which may be intirely remedied by the leaving of the firſt Crop for Seed, as hath been directed.

When Cattle are fed with this Hay, the beſt Way is to put it in Racks, otherwiſe they will tread a great Quantity of it down with their Feet. This Feed is much better for moſt other Cattle than Milch Cows, ſo that theſe ſhould rarely have any of it, leſt it prove hurtful to them; tho' when it is dry, it is not near ſo injurious to any ſort of Cattle as when green.

The ſecond and third Sorts grow

wild in Meadows amongſt the Graſs, where their Roots will abide many Years, and are cut with the Graſs, and dry'd for Food: But theſe are rarely cultivated in *England*, becauſe they are Plants of much ſmaller Growth than the *Clover*.

The fourth Sort is an annual or biennial Plant, which periſhes as ſoon as the Seeds are ripe. This grows wild in divers Parts of *England* amongſt Corn, or upon other arable Land, and is ſeldom cultivated unleſs in Botanick Gardens, it being a medicinal Plant.

The fifth and ſixth Sorts do alſo grow wild in *England*, but are often preſerv'd in *Botanick* Gardens for Variety. The fifth Sort produces Heads very like a *Strawberry*, from whence it had its Name; and the ſixth Sort has Heads very like *Hops*, for which Diverſity they are ſometimes cultivated in Gardens, but they are not apply'd to any Uſe.

The ſeventh, eighth, and ninth Sorts are alſo preſerv'd in Gardens for Variety, where they are planted in Pots, and ſhelter'd in Winter amongſt other Exotick Plants; but the ſeventh and eighth Sorts will endure the Cold of our ordinary Winters in the open Air, provided they are planted on a dry Soil, and in a warm Situation; but the ninth Sort requires to be ſhelter'd from ſevere Froſt, but ſhould have as much free Air as poſſible in mild Weather.

Theſe Plants may be propagated either from Seeds, or by planting Cuttings of them in the Spring, upon a Bed of rich, light Earth, obſerving to water and ſhade them until they have taken Root; after which they muſt be carefully clear'd from Weeds during the Summer Seaſon, and in *Auguſt* ſome of the Plants ſhould be taken up and planted in Pots fill'd with light, ſandy Earth, which in Winter ſhould be plac'd under a common Hot-bed Frame, where they may have Air in mild Weather; but in froſty Weather may be ſhelter'd with Glaſſes, *&c.* If they are propagated from Seeds, theſe ſhould be ſown towards the latter End of *March* upon a Bed of light Earth, and when the Plants are come up, they muſt be carefully clear'd from Weeds, that they may not be overborn thereby; and when they are about four Inches high, they ſhould be planted either into Pots, or the Borders where they are to remain, becauſe if they are ſuffer'd to grow very rank before they are remov'd, they do not bear tranſplanting ſo well. Theſe Plants are preſerv'd in Gardens more for the Sake of Variety than any real Beauty, eſpecially the two firſt, which ſmell ſo ſtrong of *Bitumen*, when bruis'd, as ſcarcely to be born without Uneaſineſs.

TRIPOLIUM; *vide* After.

TRITICUM; Wheat.

The *Characters* are;

It hath an apetalous Flower, which is diſpos'd into Spikes; each ſingle Flower conſiſts of many Stamina *(or Threads) which are included in a ſquamous Flower-cup, which hath Awns; the Pointal alſo riſes in the Center, which afterwards becomes an oblong Seed, which is convex on one Side, but hath a Furrow on the other; is farinaceous, and encloſ'd by a Coat which was before the Flower-cup: Theſe are produc'd ſingly, and are collected in a cloſe Spike, being affix'd to an indented Axis.*

The *Species* are;

1. Triticum; *hybernum, ariſtis carens. C. B. P.* White or red Wheat without Awns.

2. Triticum; *ſpica & granis rubentibus. Raii Syn.* Red Wheat, *in ſome Places call'd,* Kentiſh Wheat.

3. Triticum; *ſpica & granis albis. Raii Syn.* White Wheat.

4. Triticum; *ariſtis circumvallatum, granis & ſpica rubentibus, glumis lævibus & ſplendentibus. Raii Syn.* Red-ear'd bearded Wheat.

5. Triticum; *ſpica villoſa quadrata longiore, ariſtis munitum. Hiſt. Ox.* Cone Wheat.

6. Triticum; *ariſtatum, ſpica maxima cinericea, glumis hirſutis. Raii Syn.* Grey Wheat, *and in ſome Places,* Duckbill Wheat *and* Grey Pollard.

7. Triticum; *majus, longiore grano, glumis foliaceis incluſo, ſeu Triticum Polonia dictum. Hiſt. Ox.* Polonian Wheat.

8. Triticum; *ſpica multiplici. C. B. P.* Many-ear'd Wheat.

9. Triticum; *æſtivum. C. B. P.* Summer Wheat.

10. Triticum; *ſpica hordei Londinenſibus. Raii Syn.* Naked Barley; *vulgò.*

All theſe ſeveral Sorts of *Wheat* are cultivated in divers Parts of *England*, but the Manner of ſowing and managing them being ſo well known to moſt Farmers, and being more proper for a Treatiſe of Husbandry than of Gardening, I ſhall omit mentioning it in this Place.

TUBEROSE; *vide* Hyacinthus Tuberoſus.

TULIPA; Tulip.

The *Characters* are;

It hath a Lily Flower, compos'd for the moſt part of ſix Leaves, ſhap'd ſomewhat like a Pitcher; the Pointal, which ariſes in the Middle of the Flower, ſurrounded with Stamina, *afterwards becomes an oblong Fruit, which opens into three Parts, is divided into three Cells, and full of plain Seeds, which reſt upon one another in a double Row. To theſe Marks muſt be added, a coated Root, with Fibres on the lower Part.*

It would be to little Purpoſe to enumerate the ſeveral Varieties of theſe Flowers, which may be ſeen in one good Garden, ſince there is no End of their Numbers; and what ſome People may value at a conſiderable Rate, others reject; and as there are annually a great Quantity of new Flowers obtain'd from Breeders, ſo thoſe which are old, if they have not very good Properties to recommend them, are thrown out and deſpis'd: I ſhall therefore point out the Properties of a good *Tulip*, according to the Characteriſticks of the beſt Floriſts of the preſent Age. 1. It ſhould have a tall, ſtrong Stem. 2. The Flower ſhould conſiſt of ſix Leaves, three within, and three without; the former ought to be larger than the latter. 3. Their Bottom ſhould be proportion'd to their Top, and their upper Part ſhould be rounded off, and not terminate in a Point. 4. Theſe Leaves, when open'd, ſhould neither turn inward nor bend outward, but rather ſtand erect, and the Flower ſhould be of a middling Size, neither over large nor too ſmall. 5. The Stripes ſhould be ſmall and regular, ariſing quite from the Bottom of the Flower; for if there are any Remains of the former ſelf-colour'd Bottom, the Flower is in Danger of loſing its Stripes again. The Chives ſhould not be yellow, but of a brown Colour. When a Flower has all theſe Properties, it is eſteem'd a good one.

Tulips are generally divided into three Claſſes, according to their Seaſons of Flowering; as, 1. *Præ-*

coces or Early Blowers, *Media's* or Middling Blowers, and *Serotine's* or Late Blowers; but there is no Occaſion for making any more Diſtinctions than two, *viz.* Early and Late Blowers.

The Early Blowing *Tulips* are not near ſo fair, nor riſe half ſo high as the Late ones, but are chiefly valu'd for appearing ſo early, in the Spring; ſome of which will flower the Beginning of *February*, if planted near a Wall, Pale, Hedge, or other Shelter; and the others do ſucceed them, ſo that they keep flowering until the general Seaſon for theſe Flowers is come, which is towards the End of *April*. As theſe Early Blowing *Tulips* are but few, ſo I ſhall inſert the Names of the principal of them; which are as follow:

1. *Duke Van Toll*, or *Winter Duke.*
2. *General Duke.*
3. *General Brancion.*
4. *Pretty Betty.*
5. *Dutcheſs* of *Brancion.*
6. *Lac Verine.*
7. *Violet Ratgans.*
8. *Violet Remow* or *Pourpre Liſſe.*
9. *Palto Van Leyden.*
10. *Floriſante.*
11. *Blindenburgh.*
12. *Nonſuch.*
13. *Admiral Crinki.*
14. *General Molſwick.*
15. *Paragon Cleremont.*
16. *Admiral Encuſen.*
17. *Merillion.*
18. *Nobleſt.*
19. *Early Perfect.*
20. *Superintendant.*
21. *Vice Roy.*
22. *Maria.*
23. *Aurora Van Bart.*
24. *Paragon Grebberi.*
25. *Galatea.*
26. *Marquis.*
27. *Gilden Bloemen.*
28. *Alcetus.*
29. *Jeweel Van Haerlem.*
30. *Jacht Van Delft.*
31. *Goude Son.*
32. *Flamboyant.*
33. *Bruyd Renard.*
34. *Palamedes.*
35. *Apollo.*
36. *Juno.*
37. *Silver-boot.*
38. *Florida Voorhelm.*
39. *Roy d'Eſpagne.*
40. *Mertopolit.*
41. *Konings-kroon.*

Theſe are the Names which have been impos'd on theſe Flowers by the Floriſts of the ſeveral Countries where they were rais'd, and by which the Roots may be obtain'd from *Flanders* and *Holland*, where the Floriſts are very exact in keeping up their Liſts of theſe Flowers compleat.

The Roots of theſe Early Blowing *Tulips* ſhould be planted the Beginning of *September* in a warm Border, near a Wall, Pale, or Hedge, becauſe if they are put into an open Spot of Ground, their Buds are in Danger of ſuffering by Morning Froſts in the Spring. The Soil for theſe ſhould be renew'd every Year, where People intend to have them fair. The beſt Soil for this Purpoſe is that which is taken from a light ſandy Paſture, with the Turf rotted amongſt it, and to this ſhould be added a fourth Part of Sea-ſand. This Mixture may be laid about ten Inches deep, which will be ſufficient for theſe Roots, which need not be planted more than four or five Inches deep at moſt. The Off-ſets ſhould not be planted amongſt the blowing Roots, but in a Border by themſelves, where they may be planted pretty cloſe together, eſpecially if they are ſmall; but theſe ſhould be taken up when their Leaves decay, in the ſame manner as the blowing Roots, otherwiſe they would rot, if the Seaſon ſhould prove very wet, for theſe are not ſo hardy as the late Blowers, nor do they increaſe half ſo faſt as thoſe, ſo that a greater Care is required to preſerve the Off-ſets of them.

When theſe *Tulips* come up in the Spring, the Earth upon the Surface of the Borders ſhould be gently ſtirr'd and clear'd from Weeds, and as the Buds appear, if the Seaſon ſhould prove very ſevere, it will be of great Service to cover them with Mats; for want of which many times they are blighted, and their Flowers decay before they blow, which is often injurious to their Roots, as is alſo the cropping of the Flowers ſo ſoon as they are blown, becauſe their Roots, which are form'd new every Year, are not at that time arriv'd to their full Magnitude, and are hereby depriv'd of their proper Nouriſhment.

If when theſe Flowers are blown, the Seaſon ſhould prove very warm, it will be proper to ſhade them with Mats, *&c.* in the Heat of the Day; as alſo if the Nights are froſty, they ſhould be in like manner covered, whereby they may be preſerved a long time in Beauty; but when their Flowers are decay'd, and the Seed-veſſels begin to ſwell, they ſhould be broken off juſt at the Top of the Stalks, becauſe if they are permitted to ſeed, it will injure the Roots.

When the Leaves of theſe Flowers are decay'd (which will be before the late Blowers are out of Flower) their Roots ſhould be taken up, and ſpread upon Mats in a ſhady Place to dry; after which they ſhould be clear'd from their Filth, and put up in a dry Place, where the Vermin cannot come to them, until the Seaſon for planting them again, being very careful to preſerve every Sort ſeparate, that you may know how to diſpoſe of them at the Time for planting them again; becauſe it is the better Way to plant all the Roots of each Sort together (and not to intermix them, as is commonly practis'd in moſt other Kinds of Flowers) for as there are few of them which blow at the ſame Time, ſo when the ſeveral Roots of one Sort are ſcatter'd thro' a whole Border, they make but an indifferent Appearance; whereas when twenty or thirty Roots of the ſame Sorts are placed together, they will all flower at the ſame Time, and afford a more agreeable Proſpect.

There are many curious Perſons, who, in order to preſerve their ſeveral Kinds of *Tulips*, and other bulbous-rooted Flowers ſeparate, have large flat Boxes made, which are divided in ſeveral Parts by ſmall Partitions, each of which is numbred in the ſame manner as the Diviſions of their Beds; ſo that when a Catalogue of their Roots is made, and the Numbers fix'd to each Sort in the Beds, there is nothing more to do when they take up their Roots, but to put every Kind into the Diviſion mark'd with the ſame Number which was placed to each Sort in the Bed, which ſaves a great deal of Trouble in making freſh Marks every Time the Roots are taken up, and effectually anſwers the Purpoſe of preſerving the Kinds ſeparate.

The ſeveral Sorts of theſe early-blowing *Tulips* do riſe to different

Heights in their Stems, ſo that ſcarcely any two of them do flower to an equal Height. The *Duke Van Toll* being one of the firſt that appears in the Spring, is generally very ſhort ſtalk'd, and ſo the other Sorts in Proportion to their Earlineſs, are ſhorter than thoſe which ſucceed them; and the late-blowing Kinds are all of them conſiderably longer in their Stems than any of the *Præcoces*, or Early-blowers; ſo that when they are confuſedly mix'd together they make a very indifferent Appearance.

The late blowing *Tulips* are ſo numerous, that, as I before obſerv'd, it would be to no Purpoſe to attempt to make a Catalogue of them. Theſe are generally obtain'd from Breeders, which is a Term apply'd to all ſuch Flowers as are produc'd from Seeds, which are of one Self-colour, and have good Bottoms and Chives: Theſe do, in Time, break into various beautiful Stripes, according to the Ground of their former Self-colour: But this muſt be intirely thrown off, otherwiſe they don't eſteem a Flower well broke.

Of theſe Breeders there hath been a great Variety brought into *England* from *Flanders* of late Years, which is the grand Nurſery for moſt Sorts of Bulbous-rooted Flowers; but there are ſome curious Perſons who have lately obtain'd many valuable Breeders from Seeds ſown in *England*: And doubtleſs were we as induſtrious to ſow the Seeds of theſe Flowers, as the People of *France* and *Flanders*, we might in a few Years have as great a Variety as is to be found in any Part of *Europe*: For altho' it is ſix or ſeven Years from the ſowing before the Flowers do blow, yet if after the firſt ſowing there is every Year a freſh Parcel ſown, when the ſeven Years are expir'd, there will be conſtantly a Succeſſion of Roots to flower every Year, which will reward the Expectation, and keep up the Spirit of Raiſing: But it is the Length of Time at firſt, which deters moſt People from the Beginning of this Work.

The Manner of propagating theſe Flowers from Seeds, is as follows: 1. You ſhould be careful in the Choice of the Seed, without which there can be little Succeſs expected. The beſt Seed is that which is ſaved from Breeders which have all the good Properties before related; for the Seeds of ſtrip'd Flowers do ſeldom produce any thing that is valuable.

The beſt Method to obtain good Seeds, is to make Choice of a Parcel of ſuch breeding *Tulip* Roots as you would ſave Seeds from, and plant 'em in a ſeparate Bed from the Breeders, in a Part of the Garden where they may be fully expoſed to the Sun, obſerving to plant them at leaſt nine Inches deep; for if they are planted too ſhallow, their Stems are apt to decay before the Seed is perfected.

Theſe Flowers ſhould always be expoſed to the Weather; for if they are ſhaded with Mats, or any other Covering, it will prevent their perfecting the Seed. About the Middle of *July* (a little ſooner or later, as the Summer is hotter or colder), the Seeds will be fit to gather, which may be known by the Dryneſs of their Stalks, and the Opening of the Seed-veſſels, at which Time it may be cut off, and preſerved in the Pods until the Seaſon for ſowing it, being careful to put it up in a dry Place, otherwiſe it will be ſubject to mould, which will render it good for little.

Having ſav'd a Parcel of good Seed, about the Beginning of *September* is the beſt Seaſon for ſowing it; when there ſhould be provided a Parcel of ſhallow Seed-Pans or Boxes, which ſhould have Holes in their Bottoms to let the Moiſture paſs off: Theſe muſt be fill'd with freſh, ſandy Earth, laying the Surface very even, upon which the Seeds ſhould be ſown as regularly as poſſible, ſo that they may not lie upon each other, then there ſhould be ſome of the ſame light, ſandy Earth ſifted over 'em, about half an Inch thick. Theſe Boxes or Pans ſhould be placed where they may have the Morning-Sun 'till eleven of the Clock, in which Situation they may remain until *October*; at which time they ſhould be remov'd into a more open Situation, where they may enjoy the Benefit of the Sun all the Day, and be ſhelter'd from the North Winds, where they ſhould remain during the Winter Seaſon; but in the Spring, when the Plants are up, they ſhould be again removed to their firſt Situation, and if the Seaſon ſhould be dry, they muſt be refreſh'd with Water, while the Plants remain green, but as ſoon as their Tops begin to decay, there muſt be no more given them, leſt it rot their tender Bulbs; therefore the Boxes ſhould be placed in a ſhady Situation during the Summer Seaſon, but not under the Drip of Trees.

Theſe Plants at their firſt Appearance have very narrow Graſſy Leaves, very like thoſe of Onions, and do come up with bending Heads, in the ſame manner as they do, ſo that Perſons who are unacquainted with them, may pull 'em up inſtead of Graſs, whilſt they are very young, before their Leaves are a little more expanded, which is rarely perform'd the firſt Year; for they ſeldom appear before the Middle of *March*, and they commonly decay about the latter End of *May* or the Beginning of *June*, according as the Seaſon is hotter or colder.

The Weeds and Moſs ſhould alſo be clear'd off from the Surface of the Earth in the Boxes, and a little freſh Earth ſifted over 'em ſoon after their Leaves decay, which will be of great Service to the Roots; theſe Boxes ſhould be conſtantly kept clear from Weeds, which if permitted to grow therein, when they are pulled up, their Roots will be apt to draw the Bulbs out of the Ground; at *Michaelmas* they ſhould be freſh earth'd again, and as the Winter comes on, ſo they muſt be again removed into the Sun as before, and treated in the ſame manner, until their Leaves decay in the Spring, when their Bulbs ſhould be carefully taken up, and planted in Beds of freſh, ſandy Earth, which ſhould have Tiles laid under them, to prevent the Roots from ſhooting downward, which they often do when there is nothing to ſtop 'em, and thereby they are deſtroy'd. The Earth of theſe Beds ſhould be about five Inches thick upon the Tiles, which will be ſufficient for nouriſhing theſe Roots while they are young.

The Diſtance which theſe young Bulbs ſhould be allow'd, need not be more than two Inches, nor ſhould they be planted above two Inches deep; but toward the End of *October*, it will be proper to cover the Beds over with a little freſh Earth, about an Inch deep, which will preſerve the Roots from the Froſt, and prevent Moſs or Weeds from growing over them. But if the Winter ſhould be very ſevere, it will be proper to cover the Beds either with Mats or Peaſe-haulm, to prevent the Froſt from entering the Ground, becauſe theſe Roots are much tenderer while young, than they are after they have acquired Strength.

In the Spring the Surface of the Ground ſhould be gently ſtirr'd, to make it clean, before the Plants come up; and if the Spring ſhould prove dry, they muſt be frequently refreſh'd with Water, during the Time of their Growth; but this muſt not be given to them in great Quantities, leſt it rot their tender Bulbs; and when their Leaves are decay'd, the Weeds ſhould be taken off, and the Beds covered with freſh Earth, which ſhould alſo be repeated again in Autumn.

In theſe Beds the Bulbs may remain two Years, during which time they muſt be conſtantly kept clear from Weeds, and in Spring and Autumn freſh earth'd, in the Manner already directed; after which the Bulbs muſt be taken up, and planted into freſh Beds, at four Inches aſunder, and as many deep, where they may remain two Years more, during which time they ſhould have the ſame Culture as before: And after that, the Bulbs being large enough to blow, they ſhould be taken up, and planted in freſh Beds, at the uſual Diſtance, and in the ſame manner as old Roots; where, when they flower, ſuch of them as are worthy to be preſerved ſhould be mark'd with Sticks, and at the Seaſon for taking up the Bulbs, they muſt be ſeparated from the others, in order to be planted as Breeders, in different Beds, but you ſhould by no means throw out the reſt, until they have flowered two or three Years, becauſe it is impoſſible to judge exactly of their Value in leſs Time; for many which at firſt flowering do appear beautiful, will afterwards degenerate ſo as to be of little Value, and others which did not pleaſe at firſt, will many times improve, ſo that they ſhould be preſerved until their Worth can be well judged of.

In this Method many Sorts of new Breeders will be annually rais'd, from which there will always be fine Flowers broken, which being the Produce of a Perſon's own Sowing, will be greatly valued, becauſe they are not in other Hands, which is what enhances the Price of all Flowers; and it has been entirely owing to this Method of raiſing new Flowers, that the *Dutch* have been ſo famous; amongſt whom the Paſſion for fine *Tulips* did ſome time ſince reign ſo violently, that many of the Floriſts near *Haerlem*, have often given an hundred Ducats for one ſingle Root; which Extravagance was the Occaſion of an Order being made by the *States*, to limit the utmoſt Price that ſhould be afterwards given for any *Tulip* Root, were it ever ſo fine.

Having thus given an Account of the Method of raiſing theſe Flowers from Seeds, I ſhall now proceed to the Management of ſuch Roots which are term'd Breeders, ſo as to have ſome of them every Year break out into fine Stripes.

There are ſome who pretend to have Secrets how to make any Sort of Breeders break into Stripes whenever they pleaſe; but this I dare ſay is without Foundation; for from many Experiments which I have made in this Kind, I never could find any Certainty of this

Matter: All that can be done by Art, is, to ſhift the Roots every Year into freſh Earth, and a different Situation, by which Method I have had very good Succeſs.

The Earth of theſe Beds ſhould be every Year different; for although it is generally agreed, that lean, hungry, freſh Earth doth haſten their breaking, and cauſe their Stripes to be the finer, and more beautiful; yet, if they are every Year planted in the ſame Sort of Soil, it will not have ſo much Effect on them, as if they were one Year planted in one Sort of Earth, and the next in a very different one, as I have ſeveral times experienced.

The beſt Compoſt for theſe Roots is a third Part of freſh Earth from a good Paſture, which ſhould have the Sward rotted with it; a third Part of Sea Sand; and the other Part ſifted Lime-rubbiſh; theſe ſhould be all mix'd together, ſix or eight Months at leaſt before it is uſed, and ſhould be frequently turned, in order to mix the Parts well together. With this Mixture the Beds ſhould be made about eighteen Inches deep, after the following manner: After the old Earth is taken from out of the Bed to the Depth intended, then ſome of the freſh Earth ſhould be put in about ten Inches thick, this ſhould be levell'd exactly, and then Lines drawn each Way of the Bed, chequerwiſe; at ſix Inches diſtance, upon the Center of each Croſs, ſhould be placed the *Tulip* Roots, in an upright Poſition; and after having finiſh'd the Bed in this manner, the Earth muſt be filled in ſo as to raiſe the Bed eight Inches higher, obſerving in doing this, not to diſplace any of the Roots, and alſo to lay the Top of the Beds a little rounding, to throw off the Water.

There are many Perſons who are ſo careleſs in planting their *Tulips* Roots, as only to dig and level the Beds well, and then with a blunt Dibble to make Holes, into which they put the Roots, and then fill up the Holes with a Rake; but this is by no means a good Method, for the Dibble in making the Holes, preſſes the Earth cloſely on each Side and at the Bottom, whereby the Moiſture is often detain'd ſo long about the Roots as to rot 'em; beſides, the Earth being hard at the Bottom of the Bulbs, they can't ſo eaſily emit their Fibres, which muſt certainly prejudice the Roots.

Theſe Beds ſhould be ſunk, more or leſs, below the Surface, according to the Moiſture or Dryneſs of the Soil, for the Roots ſhould be ſo elevated as never to have the Water ſtand near 'em long, which is very apt to rot them. So that where the Soil is very wet, it will be proper to lay ſome Lime-rubbiſh under the Earth, in order to drain off the Wet, and the Beds ſhould be entirely rais'd above the Level of the Ground; but to prevent their falling down into the Walks, after Froſt or hard Rains, it will be proper to raiſe the Paths between them, either with Sea-Coal Aſhes or Rubbiſh, eight or ten Inches, which will ſupport the Earth of the Beds, and theſe Paths may ſlope at each End from the Middle, which will cauſe the Water to run off as it falls. But where the Soil is dry, the Beds may be ſunk a Foot or fourteen Inches below the Surface, for in ſuch Places the Beds need not be more than four or ſix Inches above the Surface,

face, which will be Allowance enough for their Settling.

During the Winter Seaſon there will be no farther Care required, the Roots being planted thus deep will be in no Danger of ſuffering by Froſt; but in the Spring, when their Leaves begin to appear above-ground, the Earth, upon the Surface of the Beds, ſhould be ſtirr'd to clear it from Weeds, Moſs, *&c.* and when the Flower-buds begin to come up, they ſhould be guarded from Froſt, otherwiſe they are very ſubject to blight and decay ſoon after they appear; but they need only be cover'd in ſuch Nights when there is a Proſpect of Froſt, for at all other Times they ſhould have as much open Air as poſſible, without which they will draw up weak, and produce very ſmall Flowers.

When theſe Breeders are in Flower, you ſhould carefully examine them, to ſee if any of them have broken into beautiful Stripes, which if you obſerve, there ſhould be a Stick put into the Ground, by every ſuch Root, to mark 'em, that they may be ſeparated from the Breeders, to plant amongſt the ſtrip'd Flowers the following Year; but you ſhould carefully obſerve whether they have thrown off their former Colour entirely, as alſo when they decay, to ſee if they continue beautiful to the laſt, and not appear ſmear'd over with the original Colour, in both which Caſes they are very ſubject to go back to their old Colour the next Year; but if their Stripes are diſtinct and clear to the Bottom, and continue ſo to the laſt (which is what the Floriſts call dying well), there is no great Danger of their returning back again, as hath been by ſome confidently reported; for if one of theſe Flowers is quite broken (as it is term'd), it will never loſe its Stripes, though ſometimes they will blow much fairer than at others, and the Off-ſets will often be more beautiful than the old Roots.

There is nothing more to be obſerved in the Culture of ſtrip'd Flowers, than what has been directed for Breeders, excepting that theſe ſhould be arched over with tall Hoops and Rails, that they may be ſhaded from the Sun in the Day-time, and protected from ſtrong Winds, hard Rains, and froſty Mornings, otherwiſe the Flowers will continue but a ſhort Time in Beauty; but where theſe Inſtructions are duly follow'd, they may be preſerv'd in Flower a full Month, which is as long as moſt other Flowers do continue.

But after their Flowers are faded, their Heads ſhould be broken off, to prevent their ſeeding; for if this is not obſerv'd, they will not flower near ſo well the following Year, and this will cauſe their Stems to decay ſooner than otherwiſe they would do, ſo that their Roots may be taken up early in *June*; for they ſhould not remain in the Ground long after their Leaves are decay'd. In taking theſe Roots out of the Ground, you muſt be very careful not to bruiſe or cut 'em, which will endanger their rotting; and, if poſſible, it ſhould be done a Day or two after Rain. Theſe Roots muſt be clear'd from their old Covers, and all Sorts of Filth, and ſpread upon Mats in a ſhady Place to dry, after which they ſhould be put up in a dry Place, where Vermin can't get to 'em, obſerving to keep every Sort ſeparated, but they ſhould not be kept too cloſe from the Air, nor ſuffer'd to lie in Heaps together, leſt they ſhould grow mouldy, after which they commonly rot when they are planted again.

The Off-ſets of theſe Roots, which are not large enough to produce Flowers the ſucceeding Year, ſhould be alſo put by themſelves, keeping each Sort diſtinct; theſe ſhould be planted about a Month earlier in Autumn than the blowing Roots, in particular Beds in the Flower-Nurſery, where they may not be expoſed to publick View: But the Earth of the Beds ſhould be prepared for 'em in the ſame Manner as for larger Roots, tho' theſe muſt not be planted above five Inches deep, and may be plac'd much nearer together than thoſe which are to flower, and in one Year moſt of them will become ſtrong enough to flower, when they may be remov'd into the Flower-Garden, and placed in the Beds amongſt thoſe of the ſame Kinds.

TULIPIFERA; The Tulip-tree.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves, which expand in ſuch a Manner, as (by ſome Thought) to reſemble a Tulip; the Pointal riſes in the Center of the Flower, ſurrounded by a great Number of Chives, and afterwards becomes a ſquamous Fruit, or Cone growing erect. To theſe Marks may be added, the Leaves, for the moſt part, being angular, the upper Part is hollowed as if cut off with Sciſſars, terminating in two Points.

We have but one *Species* of this Tree, *viz.*

TULIPIFERA; *arbor Virginiana. H. L.* The Virginian *Tulip-tree.*

This Tree is very common in *America*, where it grows to a great Magnitude, but in *England* there are at preſent but very few of them which have arriv'd to any conſiderable Stature. This was formerly kept in Pots and Tubs, and houſed in Winter with great Care, in which Management the Plants made but poor Progreſs, nor would ever have produced Flowers. But about fifty Years ago there was one of theſe Trees planted out in a Wilderneſs in the Gardens of the Right Honourable the Earl of *Peterborough*, at *Parſons-Green* near *Fulham*, which ſoon convinc'd the Curious of their Miſtake in the Culture of this Tree, by the great Progreſs it made, and in a few Years after, it produced Flowers. This Tree is yet ſtanding, and annually produces a great Quantity of Flowers, tho' ſome of the Branches begin to decay, which perhaps may have been occaſioned by its being too cloſely ſurrounded with other Trees, whoſe Roots are ſo much entangled with thoſe of this Tree, that they draw the Nouriſhment of the Ground from it. In ſome Years this Tree produces Cones, but they have not ever been perfected ſo as to contain good Seeds.

There are ſome other Trees of this Kind which have produced Flowers ſeveral Years, though I believe none of them are very large; the biggeſt I have ſeen (excepting that at *Parſons-Green*) is not more than thirty five Feet high; whereas my Lord *Peterborough*'s is upwards of fifty Feet high, and is proportionably large in the Trunk; but this has a naked Body near forty Feet high, all the Branches growing near the Top of the Tree, which might be occaſion'd by being ſo cloſely ſurrounded with other Trees; for I have obſerved, where-ever they have a more open Situation, they are ſubject to extend their Branches, and do not aſpire upwards very much, though they generally have one upright Shoot in the Middle, much after the manner of the Plane-tree, whoſe manner of Growth is very like that of this Tree.

The Flowers which theſe Trees produce, are by no means like thoſe of the Tulip, though many Perſons have been ſo incurious as to imagine them ſo, eſpecially the Inhabitants of *America*, who firſt gave the Name of *Tulip-tree* unto this Plant, by which Name it has been ſince call'd by the Inhabitants of *Europe*, who received it from them with the Plants, many Years ſince; but I have not heard that any of theſe Trees have flowered in any Part of *Europe*, except in *England.*

Mr. *Catesby*, in his *Natural Hiſtory* of *Carolina*, *&c.* ſays, There are ſome of theſe Trees in *America*, which are thirty Feet in Circumference, that the Boughs are very unequal and irregular, making ſeveral Bends or Elbows, which makes the Trees diſtinguiſhable at a great Diſtance, even when they have no Leaves upon them. They are found in moſt Parts of the Northern Continent of *America*, from the Cape of *Florida* to *New-England*, where the Timber is of great Uſe.

This Tree may be propagated from Seeds, which are often brought from *America* in the Cones; theſe ſhould be taken out in the Spring, and ſown in Pots or Boxes fill'd with light freſh Earth, and placed upon a moderate Hot-bed, which ſhould be cover'd only with Mats, and not have Glaſſes over 'em, becauſe the Glaſſes will cauſe the Earth to dry too faſt, and thereby ſpoil the Seeds.

Theſe Pots ſhould be frequently refreſh'd with Water, and when the Plants are come up, they ſhould be plac'd in a ſhady Situation during the Summer Seaſon, but in Winter they muſt be put into a Frame, where they may enjoy the open Air in mild Weather, but muſt be ſhelter'd from Froſt.

In the following Spring the Plants ſhould be taken up, and each planted in a ſeparate ſmall Pot, fill'd with light, freſh Earth, and if theſe Pots are plunged into a moderate Hot-bed, under Mats, it will promote their Rooting; in Summer theſe Plants muſt be remov'd into the Shade, and in Winter into a Frame as before: After this manner they may be treated three or four Years, until they have acquir'd Strength, when they may be turn'd out of the Pots in the Spring, and planted where they are to remain, which ſhould always be near the Shelter of other Trees, where they will grow much better than in an open Situation, provided they are not too much crowded or overhung by large Trees.

There are ſome People who propagate this Tree by Layers, but they are commonly two or three Years before they take Root, and theſe do ſeldom make ſo ſtrait Trees as thoſe rais'd from Seeds, though indeed they will produce Flowers ſooner, as is always the Caſe with ſtunted Plants.

This Tree ſhould be planted on a light loamy Soil, not too dry, on which it will thrive much better than upon a ſtrong Clay, or a dry gravelly Ground; for in *America* they are chiefly found upon a moiſt deep Soil, where they will grow to a prodigious Size. Though it will not be proper to plant theſe Trees in a Soil which is too moiſt in *England*, becauſe it might endanger the rotting of the Fibres of the Roots, by the Moiſture continuing too long about them, eſpecially if the Bottom be a Clay or a ſtrong Loam, which will detain the Wet.

Laurel-leav'd TULIP-TREE; *vide* Magnolia.

TURKS CAP; *vide* Lilium flore reflexo.

TURKEY WHEAT; *vide* Mays.

TURNIP; *vide* Rapa.

TURNSOLE; *vide* Heliotropium.

TURRITIS; Tower-Muſtard.

The *Characters* are;

The Flower conſiſts of four Leaves, which expand in Form of a Croſs, out of whoſe Empalement riſes the Pointal, which afterwards becomes a long ſmooth Pod, which grows for the moſt Part upright, and opens into two Parts, in each of which are contain'd many ſmooth Seeds.

The *Species* are;

1. TURRITIS; *vulgatior. J. B.* Common Tower-Muſtard.

2. TURRITIS; *foliis inferioribus Cichoraceis, cæteris perfoliata. Tourn.* Tower-Muſtard, with its under Leaves like thoſe of Cichory, and the upper Leaves like Thoroughwax.

3. TURRITIS; *muralis minor. Pet. H. B.* Wall-Creſs, *or* Tower-Muſtard with Daiſie Leaves.

4. TURRITIS; *Leucoii folio. Tourn.* Tower-Muſtard with a Stock-gilliflower Leaf.

There are ſeveral other *Species* of this Plant, which are preſerv'd in curious Botanick Gardens for the Sake of Variety, but as they have little Beauty or Uſefulneſs, ſo they are ſeldom cultivated in other Gardens. The three firſt Sorts do grow wild upon Walls and Buildings in divers Parts of *England*, but the fourth Sort has not been diſcover'd to grow in this Country, except in Gardens.

They may all be cultivated by ſowing their Seeds upon a Bed of light dry Earth in the Spring, and when the Plants are come up, they ſhould be tranſplanted where they are to remain for good, obſerving to water 'em until they have taken Root, after which they will require no farther Care, but to clear 'em from Weeds, and the ſecond Year they will produce Seeds, after which the Plants never do continue.

TUSSILAGO; Coltsfoot.

The *Characters* are;

It hath a radiated Flower, whoſe Disk conſiſts of many Florets, but the Crown is compos'd of many half Florets; the Embryo's are included in a multifid Flower-cup; which are afterwards turn'd to downy Seeds, fix'd in a Bed. To which Notes may be added, The Flowers appearing before the Leaves, in Spring.

The *Species* are;

1. TUSSILAGO; *vulgaris. C. B. P.* Common Coltsfoot.

2. TUSSILAGO; *Alpina, rotundifolia, glabra. C. B. P.* Round-leav'd ſmooth Coltsfoot of the *Alps.*

The firſt of theſe Sorts is very common in watery Places in almoſt every Part of *England*, and is rarely kept in Gardens; for the Roots do creep under-ground, and increaſe ſo faſt, that in a ſhort Time they will ſpread over a large Spot of Ground.

The ſecond Sort grows wild upon the *Alps*, from whence it has been tranſplanted into ſome curious Botanick Gardens for the Sake of Variety; the Flowers of this are purple, and thoſe of the common Sort are yellow.

V A

VACCARIA; *vide* Lychnis.

VACCINIA; *vide* Vitis Idea.

VALERIANA; Valerian.

The *Characters* are;

The Leaves grow by Pairs, oppoſite upon the Stalks; the Flower conſiſts of one Leaf, is tubuloſe, and divided into five Segments at the Top: Theſe Flowers are, for the moſt Part, collected into a ſort of Umbel upon the Top of the Stalks, and are ſucceeded by oblong flat Seeds, which are winged with a ſoft Down.

The *Species* are;

1. Valeriana; *hortenſis, Phu, oluſatri folio, Dioſcoridis. C. B. P.* Great Garden *Valerian, or* Phu.

2. Valeriana; *ſylveſtris, magna, aquatica. J. B.* Great wild Water *Valerian.*

3. Valeriana; *major, ſylveſtris, montana. C. B. P.* Great wild Mountain *Valerian.*

4. Valeriana; *paluſtris, minor. C. B. P.* Small Marſh *Valerian.*

5. Valeriana; *rubra. C. B. P.* Red Garden *Valerian.*

6. Valeriana; *rubra, anguſtifolia. C. B. P.* Narrow-leav'd red Garden *Valerian.*

7. Valeriana; *marina, latifolia, major, alba. Mor. Umb.* Great broad-leav'd white Sea *Valerian.*

The firſt of theſe Sorts is propagated in *England* for medicinal Uſe, and is called in the Shops by the Name of *Phu*, to diſtinguiſh it from the *Mountain Valerian*, which is preferr'd to all the other Sorts, by the modern Phyſicians, though the Roots of this firſt are ſtill continued in ſome of the capital Medicines.

This Plant is propagated by parting of its Roots, either in Spring or Autumn, which ſhould be planted in Beds of freſh dry Earth, about eight or ten Inches aſunder, (for they commonly ſpread and multiply very faſt); if the Seaſon be dry, you muſt water the Plants until they have taken Root; after which they will require no farther Care, but to keep them clean from Weeds, and in Autumn, when their Leaves are decay'd, the Roots ſhould be taken up and dry'd for Uſe.

The ſecond Sort is very common in moiſt Places, and by the Sides of Rivers and Ditches in moſt Parts of *England*, but is rarely cultivated in Gardens. The Roots of this Kind, being ſo common near *London*, are generally ſold in the Markets inſtead of the third Sort, which is what ſhould always be uſed, as being by far the ſtrongeſt and moſt valuable.

The third Sort is generally found upon dry chalky Soils, in ſhady Places, in diverſe Parts of *England*, the Roots of which are much preferable to thoſe of the ſame Kind which are cultivated in Gardens; (as are all the Sorts of Aromatick Plants, when gather'd from their native Places of Growth).

This Plant may be propagated by parting the Roots either in Spring or Autumn, as was directed for the firſt Sort; but you ſhould always obſerve to plant them upon a dry freſh undung'd Soil, in which, though the Roots will not make near ſo great Progreſs, as in a rich moiſt Soil, yet they will be much preferable to them for Uſe. Theſe Roots ſhould alſo be taken up, when the Leaves decay in Autumn,

tumn, and preſerved dry until uſed.

The fourth Sort is very common in moiſt Soils, in divers Parts of *England*, but is ſeldom propagated in Gardens. This is placed among the Officinal Simples in the *College Diſpenſatory*, though it is rarely uſed in Medicine. It may be propagated in a moiſt Soil, by parting the Roots as the former.

The fifth, ſixth, and ſeventh Sorts are propagated in Gardens for the Beauty of their Flowers, but they are only proper for large Gardens, being very apt to grow too large for ſmall Places. Theſe may be propagated by parting their Roots, in the manner before directed, or from Seeds, which ſhould be ſown in Autumn, ſoon after they are ripe, upon a Bed of light freſh Earth; and in the Spring, when the Plants come up, they ſhould either be tranſplanted into Nurſery-beds, or the Borders where they are to remain for good.

Some of theſe Plants will flower the firſt Seaſon, but the ſecond Year they will all flower very ſtrong. They commonly grow about three Feet high, and when the Roots are ſtrong, they will continue flowering moſt part of the Summer, which renders them worthy of a Place in large Borders, and alſo in Avenues and other abject Parts of the Garden, they being very hardy, and will grow in almoſt any Soil or Situation; but their Roots will abide longeſt in a dry barren Soil; for in rich moiſt Places they ſeldom continue more than two Years.

The Seeds of theſe Kinds will often get into the Joints of old Walls, where they will grow and abide many Years, without any Care or Culture, and produce Flowers moſt Part of the Summer; and in ſuch a Situation they will endure all Weathers, without the leaſt Injury. Theſe Plants are never uſed in Medicine.

VALERIANA GRÆCA; *vide* Polemonium.

VALERIANELLA; Corn-ſallet, *or* Lamb's-lettuce.

The *Characters* are;

The Leaves grow by Pairs oppoſite on the Branches; the Branches are always divided into two Parts, and appear at the Top like an Umbrello; the Flower conſiſts of one Leaf, which is cut into many Segments, and is ſucceeded by one naked Seed, having no Down adhering to it, in which it differs from the Valerian.

The *Species* are;

1. VALERIANELLA; *arvenſis, præcox, humilis, ſemine compreſſo. Mor. Umb.* Early low Corn-ſallet with a flat Seed.

2. VALERIANELLA; *arvenſis, præcox, humilis, foliis ſerratis. Tourn.* Early low Corn-ſallet with ſerrated Leaves.

3. VALERIANELLA; *arvenſis, ſerotina, altior, ſemine turgidiore. Mor. Umb.* Taller late Corn-ſallet with a turgid Seed.

4. VALERIANELLA; *ſemine ſtellato. C. B. P.* Corn-ſallet with a ſtarry Seed.

5. VALERIANELLA; *cornucopoides, rubra vel Indica. Mor. Umb.* Red or Indian Corn-ſallet reſembling the Cornucopia.

The three firſt Sorts are found wild in ſeveral Parts of *England*. The third is often cultivated in Gardens, for Sallets in the Spring, though either of the three may be cultivated for the ſame Purpoſe, they being equally good. The Seeds of theſe Plants ſhould be ſown in Autumn, ſoon after they are ripe, for if they are kept till Spring, the Plants ſeldom come up the ſame Summer; the Seeds commonly remaining in the Ground, will come up the ſucceeding Spring, notwithſtanding the Place be dug and ſowed with other Seeds, as I have often obſerved.

Theſe Plants will grow in almoſt any Soil or Situation, and require no farther Care but to keep 'em clear from Weeds, until they are fit for Uſe: They ſhould always be cut while they are young, for if they are grown pretty large, they will become ſtrong and bitter.

The fourth and fifth Sorts are preſerved in Botanick Gardens for Variety, but are not of any Uſe. Theſe may be propagated by ſowing their Seeds in the Spring, upon a Bed of dry Earth, where they may remain to flower and ſeed.

Theſe are all annual Plants, which muſt be ſown every Year, or their Seeds permitted to ſcatter upon the Ground, where they will come up, and thrive without any other Culture, than only to clear 'em from Weeds.

VERATRUM; White Hellebore.

The *Characters* are;

The Flower is naked, conſiſting of ſix Leaves, which expand in Form of a Roſe, in the Middle of which ariſes the Pointal, ſurrounded by ſix Stamina, or Threads, which afterwards turns to a Fruit, in which, for the moſt part, three membranaceous Sheaths are gathered into a little Head, and are full of oblong Seeds, reſembling a Grain of Wheat, and encompaſs'd, as it were, by a leafy Wing.

The *Species* are;

1. VERATRUM; *flore ſubviridi. Tourn.* White Hellebore with a greeniſh Flower.

2. VERATRUM; *flore atro-rubente. Tourn.* White Hellebore with a dark red Flower.

The firſt of theſe Plants is that which is ordered for medicinal Uſe, and is, by much, the ſtronger and more acrid Plant; for when both Sorts are placed near each other, the Snails will entirely devour the Leaves of the ſecond Sort, when at the ſame time they will ſcarcely touch thoſe of the firſt. The ſecond Sort doth alſo appear ſooner in the Spring, and flowers near a Month before the firſt Sort.

Theſe Plants are very pretty Ornaments when planted in the middle of open Borders of the Pleaſure-Garden; for if they are placed near Hedges or Walls, where generally Snails do harbour, they will greatly deface the Leaves, eſpecially of the ſecond Sort, by eating them full of Holes; and as a great Part of the Beauty of theſe Plants conſiſts in their broad-folded Leaves, ſo when they are thus defaced, the Pleaſure is almoſt loſt.

They may be propagated by parting their Roots toward the latter end of *February* or the beginning of *March*, juſt before they begin to ſhoot, and ſhould be planted in a light, freſh, rich Soil, in which they will thrive exceedingly, and produce ſtrong Spikes of Flowers. Theſe Roots ſhould not be removed oftener than once in three Years, by which time (if they like the Soil) they will be very ſtrong, and afford many Heads to be taken off; but if they are frequently tranſplanted, it will prevent their increaſing, and cauſe them to flower very weak.

You may alſo propagate theſe Plants by Seeds, which ſhould be ſown as ſoon as ripe, either in a

Bed or Box filled with freſh, light Earth, and the Ground kept conſtantly clear from Weeds. In the Spring the Plants will appear, at which Time, if the Seaſon be dry, you ſhould now and then refreſh them with Water, which will greatly promote their Growth; and you muſt carefully clear them from Weeds, which, if permitted to grow, will ſoon over-ſpread and deſtroy theſe Plants while young. The Spring following, juſt before the Plants begin to ſhoot, you ſhould prepare a Bed of freſh, light Earth, and carefully take up the young Plants (obſerving not to break their Roots) and plant them therein about ſix Inches ſquare, where they may remain until they are ſtrong enough to flower, when they ſhould be tranſplanted into the Borders of the Pleaſure-Garden. But as theſe Plants ſeldom flower in leſs than four Years, from Seeds, ſo this Method of propagating them is not very much practiſed in *England*.

VERBASCUM; Mullein.

The *Characters* are;

The Flower conſiſts of one Leaf, which expands in a circular Form, and is cut into ſeveral Segments; out of the Center ariſes the Pointal, which afterwards becomes an oval, pointed Fruit, divided into two Cells, by a middle Partition, which are filled with ſmall angular Seeds.

The *Species* are;

1. VERBASCUM; *mas, latifolium, luteum. C. B. P.* Great white Mullein, High-taper, *or* Cows-Longwort.

2. VERBASCUM; *pulverulentum, flore luteo parvo. J. B.* Hoary Mullein with ſmall yellow Flowers.

3. VERBASCUM; *flore albo parvo. J. B.* White flower'd Mullein.

4. VERBASCUM; *nigrum, flore parvo, apicibus purpureis. J. B.* Sage-leav'd black Mullein.

5. VERBASCUM; *Blattariæ foliis nigrum, amplioribus foliis alatis, apicibus purpuraſcentibus. Hor. Bat.* Mullein with a dark Moth-Mullein Leaf, and yellow Flowers with purpliſh *Apices*.

6. VERBASCUM; *Orientale, Sophiæ folio. T. Cor.* Eaſtern Mullein with a Flix-weed Leaf.

7. VERBASCUM; *nigrum, folio papaveris corniculati. C. B. P.* Black Mullein with a Horn-poppy Leaf.

8. VERBASCUM; *humile, Alpinum, villoſum, boraginis folio & flore. Tourn.* Low hairy Alpine Mullein, with a Leaf and Flower like that of Borage, *commonly call'd*, Bears-ear Sanicle.

The four firſt Sorts grow wild in divers Parts of *England*, and are rarely cultivated, except in Botanick Gardens for Variety. The firſt Sort is that which is uſed in Medicine, which is the moſt common of them all, growing upon the Sides of dry Banks, in moſt Parts of *England*.

Theſe may be all cultivated by ſowing their Seeds in *Auguſt*, on a Bed of light Earth, in an open Situation, where the Plants will come up the ſucceeding Month, and will endure the Winter's Cold very well, provided they have a dry Soil. In *February* the Plants ſhould be tranſplanted where they are to remain, allowing them a great Diſtance; for they grow pretty tall and large: In *June* following they will flower, and their Seeds will be ripe in *July*. But notwithſtanding theſe Plants grow wild in *England*, yet two or three of each Kind may be admitted in large Gardens, for the Variety of their hoary Leaves, together with the extreme Sweetneſs of their

Flowers, which have a Scent ſomewhat like Violets.

The fifth, ſixth, and ſeventh Sorts are not Natives of this Country, but have been obtain'd from abroad; the fifth was ſent from *Leyden*, by the learned Dr. *Boerhaave*, but I don't at preſent know from whence he receiv'd it. The ſixth Sort was gather'd by my ingenious Friend Mr. *Henry Hopkey*, upon *Gibraltar* Hills, from whence he ſent me the Seeds, which flouriſh'd in the *Phyſick Garden* very well two Years, and flower'd extremely, but did not perfect Seeds, and being a biennial Plant is ſince intirely decay'd.

The ſeventh Sort was found in the *Levant* by Monſieur *Tournefort*, chief Botaniſt to the late *French* King, who brought the Seeds to the Royal Gardens at *Paris*, from whence it hath been communicated to ſeveral other curious Gardens in *England* and *Holland*. This Plant is alſo biennial, and rarely produces good Seeds in *England*, unleſs the Summer be warm and dry.

Theſe Sorts may be propagated in the ſame Manner as the four firſt, but ſhould be planted in a warm, dry Situation in Winter, otherwiſe they are very ſubject to be deſtroy'd by Froſt, being Natives of warmer Countries.

The eighth Sort is a Native of the *Alps* and *Pyrenæan* Mountains, and was formerly preſerv'd in ſeveral Gardens with great Care, being placed in the Green-houſe in Winter, as ſuppoſing it too tender to endure the Cold of our Climate in the open Air; but this is now treated in a different Manner; for it ſhould be placed, as much as poſſible, in the Shade, and managed as *Auricula*'s, with which Treatment it thrives much better than if preſerved with great Tenderneſs, and will produce Flowers and Seeds in great Plenty. This Plant may be propagated by Off-ſets, as is practis'd for *Auricula*'s, and ſhould be planted in a light rich Earth, in which it will multiply very faſt.

VERBENA; Vervain.

The *Characters* are;

It hath a labiated Flower, conſiſting of one Leaf, whoſe upper Lip is upright, and, commonly divided into two, but the under Lip is cut into three Parts, ſo that at the firſt Sight it appears like a Flower with five Leaves; theſe Flowers are each ſucceeded by four naked Seeds, which fill the Calix; to which may be added, the Flowers do generally grow in Spikes or Heads, but not in Whorles round the Stalks.

The *Species* are;

1. Verbena; *communis, cæruleo flore. C. B. P.* Common Vervain with a blue Flower.

2. Verbena; *Luſitanica, latifolia, procerior. Tourn.* Taller broad-leav'd Portugal Vervain.

3. Verbena; *Urticæ folio, Canadenſis. H. R. Par.* Canada Nettle-leav'd Vervain.

4. Verbena; *Americana, ſpica multiplici, foliis Urticæ anguſtioribus, floribus cæruleis. Par. Bat. Prod.* American Vervain with many Spikes, narrow Nettle Leaves, and blue Flowers.

There are ſeveral other Species of this Plant, which are preſerv'd in curious Botanick Gardens; but it is not my Purpoſe to enumerate them in this Place, as being Plants of no great Beauty or Uſe.

The firſt here-mentioned is very common in moſt Parts, and is rarely cultivated in Gardens; this is the Sort which is directed by the *College of Phyſicians* for medicinal Uſe, and is brought to the Markets by thoſe who gather it in the Fields.

The other Sorts, though not Natives of this Country, yet are very hardy, and will endure the ſharpeſt of our Winters in the open Air.

Theſe may all be propagated by ſowing their Seeds on a Bed of freſh Earth in the Spring, and when the Plants come up they ſhould be tranſplanted out, or thinned ſo as to allow them ten or twelve Inches Diſtance (for they generally grow pretty large, and require to have Room) after which they will require no farther Care, but to clear them from Weeds, and the ſecond Summer they will flower and ſeed, which, if permitted to fall upon the Ground, will come up the ſucceeding Spring, without any farther Culture.

VERONICA; Speedwell *or* Fluellin.

The *Characters* are;

The Leaves for the moſt part, grow oppoſite by Pairs; the Calix conſiſts of one Leaf, which is divided into four Parts, and expands in form of a Star; the Flower conſiſts of one Leaf, which is, for the moſt part, divided into four Segments, and expands in a circular Order; when the Flower decays, the Ovary becomes a membranaceous Fruit, divided into two Cells, which are ſhap'd like a Heart, and are fill'd with Seeds, which are ſometimes ſmall, and at other times large and thick.

The *Species* are;

1. Veronica; *mas, ſupina, & vulgatiſſima. C. B. P.* Common Male Speedwell *or* Fluellin.

2. Veronica; *ſpicata, anguſtifolia. C. B. P.* Narrow-leav'd ſpik'd Speedwell.

3. Veronica; *major, latifolia, erecta, Mor. Hiſt.* Greater broad-leav'd upright Speedwell.

4. Veronica; *multicaulis, Pannonica. Tourn.* Hungarian Speedwell, bearing many Stalks *or* Spikes of Flowers.

5. Veronica; *ſpicata, Cambro-Britannica, Bugulæ ſubhirſuto folio. Raii Syn. Edit.* 3. Welſh ſpiked Speedwell, with a hairy Bugle Leaf.

6. Veronica; *cærulea, trifido, aut quinquefido folio. Flor. Bat.* Blue Speedwell with a trifid or quinquefid Leaf.

7. Veronica; *Virginiana, altiſſima ſpicâ multiplici, floribus candidis. Flor. Bat.* Tall Virginian Speedwell, with many Spikes and white Flowers.

8. Veronica; *ſpicata, longifolia. Tourn.* Long-leav'd ſpik'd Speedwell.

9. Veronica; *petræa, ſempervirens. Pon. Bald.* Ever-green Rock Speedwell.

There are many other Species of this Plant, which are cultivated in Botanick Gardens for Variety, ſome of which are Natives of *England*, but as they are ſeldom preſerved in Gardens for Pleaſure, ſo I thought it not worth while to enumerate them in this Place; thoſe here-mentioned being the moſt beautiful, and beſt worth cultivating for their Flowers.

The firſt Sort grows wild, in Woods and other ſhady Places, in divers Parts of *England*, and is a Plant of little Beauty, but as it is the Sort which is uſed in Medicine, under the Title of *Paul's Betony*, ſo I thought it not amiſs to ſet it down here. This is generally brought to Market by ſuch Perſons who make it their Buſineſs to gather Herbs in the Fields to ſupply the ſame, ſo that it is not often cultivated in Gardens; but thoſe who have a Mind to propagate it, may do it with much Eaſe; for as the Branches trail upon the Ground, they puſh out Roots from their Joints, which Branches being cut off and planted, will take Root and grow in almoſt any Soil or Situation.

The ſecond, third, and fourth Sorts are very ornamental Plants in the large Borders of the Flower-Garden, particularly the fourth, which produces a great Number of Spikes of beautiful blue Flowers. Theſe continue flowering at leaſt two Months, and in cool, moiſt Seaſons much longer; and theſe Flowers are very proper to cut for Baſons or Flowers-pots to adorn Rooms in the Summer-ſeaſon.

The fifth Sort is a Native of the Mountains in *Wales*, from whence it hath been tranſplanted into many curious Gardens. This produces fine large Spikes of blue Flowers, and deſerves a Place in every Garden.

The ſixth, ſeventh, eighth, and ninth Sorts are Natives of warmer Countries than *England*, but are hardy enough to endure the Cold of our Winters very well, provided they are planted in a dry Soil. Theſe are all pretty Varieties, and do ſucceed each other in Flowering, which renders them worthy of a Place in every curious Garden. Theſe ſhould all be planted in the Middle of the Borders in the Pleaſure-Garden (except the fifth and ninth, which ſeldom grow above a Foot high, and ſo are better placed amongſt Flowers of the ſame Growth) where, being intermix'd with other Flowers, they afford an agreeable Variety.

They may be propagated by parting of their Roots, which commonly increaſe very faſt, ſo that the raiſing 'em from Seeds is ſeldom practis'd. The beſt Time for parting and tranſplanting the Roots is in *September*, that they may have Time to take freſh Root before the Winter comes on; and theſe being fix'd in Autumn, will be much ſtronger than thoſe which are remov'd in the Spring, and will produce a greater Number of Flowers.

They may be planted in almoſt any Situation, but ſhould have a middling freſh Soil, not too wet, in which they will thrive exceedingly, and require no farther Care but to keep them clear from Weeds, and to part their Roots every Autumn; for if they are ſuffer'd to remain too long unremov'd, their Roots will ſpread, and take up too much Room in the Borders, ſo as to injure ſuch Plants as grow near them.

VIBURNUM; The Way-faring *or* Pliant Mealy Tree.

The *Characters* are;

The Flower conſiſts of one Leaf, which is divided into five Parts, and expands in a circular Order; theſe are collected into the Form of an Umbrello; the Ovary, which is placed on the upper Part of the Flower, becomes a ſoft Berry, full of Juice, which contains one ſtony, compreſs'd, furrow'd Seed.

The *Species* are;

1. VIBURNUM; *Matth.* The common *Viburnum*, *or* Pliant Mealy Tree.

2. VIBURNUM; *folio variegato*. The common *Viburnum* with ſtrip'd Leaves.

The firſt of theſe Trees is very common in divers Parts of *England*, particularly in *Kent*, where it grows in moſt of the Hedges upon the dry, chalky Hills near *Graveſend*, *Rocheſter*, &c. in very great Plenty. But notwithſtanding it being thus common, yet it deſerves a Place in ſmall Wilderneſs Quarters, among other flowering Trees, where, by its mealy Leaves and Shoots, together with its large Bunches of white Flowers in the Spring, which are ſucceeded by red Berries in *Autumn*, it affords an agreeable Variety.

This Tree may be propagated either from Seeds, or by laying down the tender Branches; but the former Method being tedious, is ſeldom practis'd, eſpecially ſince young Plants may be taken from the Woods or Hedges, where there are many of the old Trees growing; from which a Number may ſoon be propagated.

The beſt Time for laying theſe Branches is in Autumn, juſt as the Leaves begin to fall (the Manner of laying them being the ſame as for other hardy Trees, need not be repeated;) by the ſucceeding Autumn the Layers will be rooted, when you may take 'em off from the old Plants, and tranſplant them into a Nurſery for two or three Years, in which they may be train'd up to regular Stems and Heads, and may afterwards be planted where they are to remain. This Tree commonly grows about twelve or fourteen Feet high, but it is rarely ſeen above ſixteen or eighteen, ſo that it ſhould be planted in Lines with ſuch Trees as do not exceed this Growth; otherwiſe it will be hid thereby, and the Beauty loſt.

The ſtrip'd Sort may be propagated by inarching it upon the plain Sort. This is preſerved by ſuch as delight in variegated Plants, but there is no great Beauty in but theſe Trees do ſeldom grow near ſo large as thoſe of the plain Sort, as is the Caſe of all other ſtrip'd Plants.

There is alſo another Sort very like to the Common, which has been introduced into the *Engliſh* Gardens lately, which was brought from *Virginia*; but as this Sort has not yet flower'd with us, ſo I can't ſay how it differs from ours. This was at firſt ſomewhat tender, while young, and in the ſharp Winter *Anno* 1728, the Plants of this Kind, which were plac'd in the open Air, were kill'd down to the Ground; but the Roots of moſt of them ſhot up again the ſucceeding Spring, and have ſince endured the Cold of our Winters very well.

AMERICAN VIBURNUM; *vide* Camara.

VICIA; Vetch.

The *Characters* are;

It hath a papilionaceous Flower, out of whoſe Empalement ariſes the Pointal, which afterwards becomes a Pod full of roundiſh or angular Seeds; to *which muſt be added, The Leaves grow as it were by Pairs, on a Middle-rib ending in a Tendril.*

The *Species* are;

1. VICIA; *ſativa, vulgaris, ſemine nigro.* C. B. P. Common Vetch *or* Tare.

2. VICIA; *ſativa alba.* C. B. P. White Vetch *or* Tare.

3. VICIA; *ſupina, latiſſimo folio non ſerrato. Tourn.* Low Vetch, with a broad Leaf not ſerrated.

4. VICIA; *ſupina, latiſſimo folio ſerrato. Tourn.* Low Vetch, with a broad ſerrated Leaf.

5. VICIA; *ſiliquas ſupra infraque terram edens. Tourn.* Eatable Vetch, having Pods both above and below Ground.

6. VICIA; *multiflora.* C. B. P. Many flower'd Vetch.

There is a great Variety of theſe Plants, many of which are preſerv'd in curious Botanick Gardens; but as they have little Beauty in their Flowers, nor are of much Uſe, ſo it would be to little Purpoſe to enumerate 'em in this Place.

The firſt of thoſe here mention'd is cultivated in the Fields in divers Parts of *England* for the Seed, which is the common Food of Pigeons: The Method of cultivating it being much the ſame as is practis'd for *Peas*, I ſhall not repeat it in this Place, but refer the Reader to that Article.

The ſecond Sort is a Variety of the firſt, from which it only differs in the Colour of the Flowers and Seeds, which in this kind are both white; but the Flowers of the other kind are purple, and the Seeds are black. This may be cultivated as the former.

The third and fourth Sorts are, at preſent, only preſerv'd in Botanick Gardens in *England*, tho' I believe they might be cultivated in the Fields, as the common Sort, with good Succeſs.

Theſe muſt be ſown in the Spring, as *Peas*, but ſhould have a light, dry Soil, and do require more Room than the common Sort, for the Plants are apt to ſpread pretty far, provided they like their Situation. They are both annual Plants, which decay ſoon after their Seeds are ripe. Theſe are ſuppos'd to be the *Bean* of the ancient *Egyptians*.

The fifth Sort was carry'd from *Africa* into the *Weſt-Indies* (by the *Negroes*, who are very fond of its Fruit) where it thrives prodigiouſly; and when once well fix'd in the Ground, will propagate itſelf very faſt: for ſoon after the Flowers fade, the Pedicle thruſts itſelf under the Surface of the Earth, where the Fruit is perfected; which if not ſought for, and taken up when ripe, will ſoon ſhoot out, and make freſh Plants: So that the Perſons who have not been acquainted with this Plant, ſeldom know how and when to look for their Pods, by which Means the *Negroes* generally gather them for their own Uſe. This Plant is alſo an Inhabitant of the *Eaſt-Indies*, and in divers Parts of *Aſia* hath been long cultivated; though there ſeems to be no extraordinary Quality in it to recommend it. In *England* it is only preſerv'd as a Curioſity, and muſt have the Aſſiſtance of a Hot-bed, otherwiſe the Fruit will not ripen.

The ſixth Sort grows wild in divers Parts of *England*, under Hedges, and by the Sides of Woods, where it climbs upon whatever Buſhes are near it; and during the Time of flowering (which is commonly in *June* and *July*) it affords an agreeable Proſpect. This Plant may be cultivated by the Sides of Wilderneſs Quarters, where it may be allow'd to climb upon ſome low Buſhes, without which Support it ſeldom thrives well; and in ſuch ſhady Situations it will flower extremely, and continue for ſeveral Years. The beſt Way to propagate it, is by ſowing the Seeds either in Spring or Autumn, in the Places where they are to remain; for theſe Plants commonly ſhoot their Roots downright into the Ground, ſo that they ſeldom thrive well if tranſplanted.

VINCETOXICUM; *vide* Aſclepias.

VINE; *vide* Vitis.

VIOLA; Violet.

The *Characters* are;

It hath a polypetalous, anomalous Flower, ſomewhat reſembling the papilionaceous Flower; for its two upper Petals, in ſome meaſure, repreſent the Standard, the two ſide ones the Wings, but the lower one, which ends in a Tail, in ſome meaſure reſembles the Keel; out of the Palement ariſes the Pointal, which afterterwards becomes a Fruit, for the moſt part three corner'd, opening into three Parts, and full of roundiſh Seeds.

The *Species* are;

1. VIOLA; *martia, purpurea, flore ſimplici odore. C. B. P.* Common purple *Violet*, with a ſweet-ſcented Flower.

2. VIOLA; *Martia, major, hirſuta, inodora. Mor. Hiſt.* Greater hairy March *Violet* without Smell.

3. VIOLA; *Martia, inodora, ſylveſtris. C. B. P.* Wild *or* Dogs *Violet*.

4. VIOLA; *Martia, alba. C. B. P.* White ſweet-ſecented *Violet*.

5. VIOLA; *Martia, multiplici flore. C. B. P.* Double purple *Violet*.

6. VIOLA; *Martia, flore multiplici candido. C. B. P.* Double White *Violet*.

7. VIOLA; *Martia, folio eleganter variegato, flore albo.* March *Violet*, with a beautiful variegated Leaf, and a white Flower.

8. VIOLA; *Martia, flore rubello.* March *Violet*, with a reddiſh colour'd Flower.

9. VIOLA; *erecta, flore cæruleo. Mor. Hiſt.* Upright *Violet*, with a blue Flower.

10. VIOLA; *Montana, lutea, grandiflora. C. B. P.* Mountain *Violet*, with a large yellow Flower.

11. VIOLA; *tricolor, hortenſis, repens. C. B. P.* Panſies, Hearts-eaſe, *or* Three-colour'd *Violet*, *commonly call'd*, Three Faces under a Hood.

The firſt Sort here mention'd is very common in Woods and ſhady Lanes in divers Parts of *England*, and is what ſhould always be us'd in Medicine; though the People who ſell theſe Flowers in the Markets, do many times impoſe upon the Ignorant the Flowers of the ſecond Sort, which are much larger than thoſe of the firſt, and fill up the Meaſure better; but they having no Smell, are very improper for Uſe.

All the eight firſt Sorts are pretty Varieties in a Garden; where being planted under Hedges, in Wilderneſſes, or other ſhady Places, they will thrive exceedingly, and will want no other Culture than only to keep them clear from Weeds; and in the Spring, when they are in Flower, they caſt forth a moſt agreeable Perfume, eſpecially in Mornings and Evenings, ſo that it renders ſuch Places very delightful at that Seaſon.

Theſe may be eaſily propagated by parting their Roots. The beſt Time for which, is at *Michaelmas*, that the Plants may take Root before Winter, ſo that they may flower ſtronger the ſucceeding Spring.

The double Sorts, and thoſe without Smell, may be admitted for Variety: But the ſingle blue, white and reddiſh colour'd Sorts, are thoſe which ſhould be moſt cultivated; becauſe theſe are all equally well ſcented, in which the greateſt Curioſity of theſe Flowers conſiſts. And theſe all growing wild in *England*, may be eaſily obtain'd in Quantity from their Places of Growth, by ſuch who are fond of theſe Flowers.

The ninth Sort is preſerv'd in ſome curious Gardens for Variety, but there is no Scent in its Flowers

ers, ſo that it hardly merits a Place in curious Flower Gardens.

The tenth Sort produces large yellow Flowers, which continue a long time: This being a Native of cold mountainous Places, ſhould have a ſhady cool Situation, and is very proper for North Borders, where it will thrive exceedingly, and continue flowering moſt Part of the Summer. It is propagated by parting of the Roots, in the ſame manner as the former.

The eleventh Sort is admitted into Gardens for the beautiful Colours of its Flowers, of which there are a great Number of Varieties, but they have no Scent. This Plant is annual, but will require no other Culture than only to place a few Roots in ſuch Parts of the Garden where you would have them grow, and ſuffer them to ſhed their Seeds, which will come up and multiply faſt enough; therefore you muſt obſerve to reduce them within Compaſs, otherwiſe they will ſpread over the whole Garden. This Plant is plac'd amongſt the Officinal Simples in the *College Diſpenſatory*.

VIORNA; *vide* Clematitis.

VIRGA AUREA; Golden-Rod.

The *Characters* are;

The Leaves are for the moſt part whole, and are plac'd alternately on the Stalks; the Calix (or Flower-cup) is ſquamous; the Flowers are ſmall, radiated, and of a yellow Colour, conſiſting of many Florets, each of which is furniſh'd with an Embryo, which afterwards becomes a Seed, having a downy Subſtance adhering to it: To which ſhould be added, that the Flowers are produc'd in a long Spike.

The *Species* are;

1. VIRGA AUREA; *vulgaris, latifolia. J. B.* The common *or* broad-leav'd Golden-Rod.

2. VIRGA AUREA; *montana, folio anguſto, ſubincano, floſculis conglobatis. Raii Syn.* Narrow-leav'd Mountain Golden-Rod, with an hoary Leaf and conglobate Flowers.

3. VIRGA AUREA; *anguſtifolia, paniculâ ſpecioſâ Canadenſis. H. R. Par.* Narrow-leav'd Canada Golden-Rod, with a ſpecious Panicle.

4. VIRGA AUREA; *Canadenſis, hirſuta paniculâ minus ſpecioſa. Boerh. Ind.* Rough Canada Golden-Rod, with a leſs ſpecious Panicle.

5. VIRGA AUREA; *Novæ Angliæ, altiſſima, paniculis nonnunquam reflexis. Flor. Bat.* The talleſt New-England Golden-Rod, with a reflex'd Panicle.

6. VIRGA AUREA; *altiſſima, ſerotina, paniculâ ſpecioſâ patulâ, Rand.* Talleſt Late-flowering Golden-Rod, with a ſpecious ſpreading Panicle.

7. VIRGA AUREA; *Virginiana, foliis anguſtioribus, aſperis, paniculâ minus ſpecioſâ. Pluk. Phyt.* Virginian Golden-Rod, with narrow rough Leaves, and a leſs ſpecious Panicle.

8. VIRGA AUREA; *rugoſis foliis, Virginiana, paniculâ florum ampliſſimâ. Pluk. Phyt.* Rough-leav'd Virginian Golden-Rod, with an ample Panicle of Flowers.

9. VIRGA AUREA; *foliis lævibus non ſerratis paniculâ ſpecioſâ, floribus magnis. Flor. Bat.* Smooth-leav'd Golden-Rod, with a ſpecious Panicle, and large Flowers.

10. VIRGA AUREA; *Marylandica, ſpicis florum racemoſis, foliis integris ſcabris. Mart. Hiſt. Rar. Plant.* Golden-Rod from Maryland, with branching Spikes of Flowers, and whole rough Leaves.

11. VIRGA AUREA; *Canadenſis Aſteriſci folio. Par. Bat.* Canada Golden-Rod, with a Leaf like Aſteriſcus.

12. VIRGA AUREA; *Americana,*

ſerrata, floribus ad foliorum alas, conglobatis. Breyn. Prod. American Golden-Rod, with ſerrated Leaves and conglobated Flowers coming out from the Wings of the Leaves.

13. Virga Aurea; *Limonii folio, paniculâ uno verſu diſpoſitâ. H. R. Par.* Golden-Rod, with a Sea Lavender-leaf, and the Flowers growing upon one Side of the Stalk.

14. Virga Aurea; *Noveboraſcenſis, glabra, caulibus rubentibus, foliis anguſtis glabris. Flor. Bat.* Smooth New-York Golden-Rod, with red Stalks, and narrow, ſmooth Leaves.

15. Virga Aurea; *floribus fiſtuloſis, ſenecionis inſtar, foliis anguſtioribus non ſerratis. Hiſt. Oxon.* Golden-Rod, with fiſtulous Flowers, ſomewhat like Groundſel, and narrow, ſmooth Leaves.

16. Virga Aurea; *Canadenſis, foliis carnoſis non ſerratis, latioribus. Hiſt. Oxon.* Canada Golden-Rod, with broad fleſhy ſmooth Leaves.

17. Virga Aurea; *Nova-Anglia, foliis longiſſimis glabris. Flor. Bat.* New-England Golden-Rod, with long, ſmooth Leaves.

There are ſeveral other Varieties of this Plant, which are preſerv'd in ſome curious *Botanick* Gardens; but thoſe here mention'd are the moſt valuable Sorts which I have yet ſeen in the *Engliſh* Gardens; the greateſt Part of which are Natives of *America*, from whence, it is very probable, there may be many other Sorts brought, ſince theſe Plants do propagate themſelves by ſhedding their Seeds, which is likely to produce new Varieties annually; as do moſt other Sorts of Plants, ſo that there may be no End to their Variety.

Theſe Plants are very great Ornaments in the Borders of large Flower Gardens, where, by their Succeſſion of Flowering, they afford a very great Pleaſure; for the earlieſt Kinds begin to flower in *June*, which are ſucceeded by other Sorts until the latter End of *October*; and their Flowers being produc'd for the moſt Part on long ſpecious Spikes or Panicles, do make a very handſome Appearance, and are very ornamental to Flower-pots, when intermix'd with Flowers of different Colours, to place in Rooms.

They are all eaſily propagated by parting their Roots in the Spring, before they begin to ſhoot, and ſhould be planted in the Middle of the larger Borders in the Flower-Garden: They will grow in almoſt any Soil or Situation, but will thrive beſt in a light freſh Earth, and an open Expoſure, tho' ſome of the hardeſt of them may be plac'd under Avenues of Trees, where they will continue in Flower a long time, and look very well. The firſt twelve Sorts are ſomewhat hardier than the reſt, and will increaſe very faſt by Off-ſets, which ſome of them ſend forth in very great Plenty, inſomuch, that if they are not carefully dug round at leaſt once in every Year, they will ſpread over the Borders where they are planted, and deſtroy ſuch Plants as ſtand near them. The other Sorts ſhould have a warmer Situation, and a dry Soil: Theſe are not ſo apt to ſpread at their Roots as the others, ſo that there will be no Difficulty of keeping them within Bounds.

The firſt Sort here mention'd is ſometimes us'd in Medicine. This grows wild in moſt ſhady Woods in the South Parts of *England*; from whence the Roots may be tranſplanted into a ſhady Part of the Garden, where they will thrive and flower very well.

Theſe are all perennial Plants, which die to the Surface of the Ground every Winter, but riſe again the ſucceeding Spring: Moſt of them produce their Flowers in Autumn, and, if the Seaſon proves favourable, will ripen their Seeds; which if ſown ſoon after ripe, will come up the following Spring, from whence ſome new Varieties may be obtain'd.

VISCUM; Miſleto.

The *Characters* are;

The Flower conſiſts of one Leaf, which is ſhap'd like a Baſon, and for the moſt part divided into four Parts, and beſet with Warts; the Ovary, which is produc'd in the Female Flowers, is plac'd in a remote Part of the Plant (or for the moſt part on different Plants) from the Male Flowers, and conſiſts of four ſhorter Leaves; this afterwards becomes a round Berry, full of a glutinous Subſtance, incloſing a plain Heart-ſhap'd Seed.

We have but one *Species* of this Plant in *England*, viz.

Viscum; *baccis albis. C. B. P.* Common Miſleto, with white Berries.

This Plant is always produc'd from Seed, and is not to be cultivated in the Earth, as moſt other Plants, but will always grow upon Trees; from whence the Antients accounted it a Super-plant, moſt of whom thought it was an Excreſcence on the Tree without the Seed being previouſly lodg'd there: Which Opinion is now generally confuted from a repeated Number of Experiments.

The manner of its being propagated is this; *(viz.)* The *Miſleto-Thruſh*, which feeds upon the Berries of this Plant, in Winter, when it it ripe, doth often carry the Seeds from Tree to Tree; for the viſcous Part of the Berry, which immediately ſurrounds the Seed, doth ſometimes faſten it to the outward Part of the Bird's Beak: which to get diſengag'd of, he ſtrikes his Beak againſt the Branches of a neighbouring Tree, and thereby leaves the Seed ſticking by this viſcous Matter to the Bark; which if it lights upon a ſmooth Part of the Tree, will faſten it ſelf thereto, and the following Winter will put out and grow, and in the ſame manner it may be propagated by Art; for if the Berries, when full ripe, are rubbed upon the ſmooth Part of the Bark of a Tree, they will adhere cloſely thereto, and if not deſtroy'd, will produce Plants the following Winter.

The Trees which this Plant doth moſt readily take upon, are, the *Apple*, the *Aſh*, and ſome other ſmooth-rind Trees; but I have ſeveral times try'd it upon the *Oak*, without Succeſs, for the Bark of that Tree is of too cloſe a Texture to admit the Seeds ſtriking therein; which is alſo the Reaſon it is ſo rarely found upon that Tree: And notwithſtanding the great Encomiums which have been given to the *Miſleto* of the *Oak*, for its Medicinal Virtues, yet I can't help thinking, that it is equally good from whatever Tree it be taken, nor is it poſſible to find this Plant growing in any Quantity upon the *Oak*; ſo that thoſe Perſons who pretend to furniſh the Town with it for Phyſical Uſe, do but impoſe upon the World, for it is ſo rarely met with, that whenever a Branch of an *Oak-tree* hath any of theſe Plants growing upon it, it is cut off, and preſerv'd by the

Curious in their Collections of Natural Curioſities; and of theſe there are but few to be ſeen in *England.*

As to what ſome Perſons have aſſerted of the manner how it is propagated, from Tree to Tree, by the *Miſleto-Thruſhes*, who eat the Berries, and void the Seed in their Dung, upon the Branches of Trees, whereby the Seeds are ſtuck thereon, and take Root into the Bark, and produce freſh Plants, I can by no means agree to; ſince if it were only this way propagated, it would always be found upon the upper Part or the Sides of ſuch Branches, upon which the Dung can only be ſuppos'd to lodge; whereas it is often found upon the under Side of Branches, where it is almoſt impoſſible for theſe Birds to caſt their Dung: Beſides, I believe the Stomachs of theſe Birds are too powerful Digeſters to ſuffer any Seeds to paſs intire through the Inteſtines. But I ſhall leave this to ſuch who have Leiſure to make Obſervations in ſuch Places where this Plant abounds, and ſhall add only a ſhort Account of the Method us'd to make Birdlime, which may not be improper to inſert in this Place for the Satisfaction of the Curious.

The *Italians* make their Birdlime of the Berries of *Miſleto*, heated and mix'd with Oil, as that made of *Holly-bark*, and to make it bear the Water, they add *Turpentine.*

That which is commonly uſed with us, is made of the Bark of *Holly*; which they boil for ten or twelve Hours: and when the green Coat is ſeparated from the other, they cover it up for a Fortnight in a moiſt Place, pounded into a tough Paſte, that no Fibres of the Wood be left; then they waſh it in a running Stream till no Motes appear, and put it up to ferment for four or five Days, and ſkum it as often as any thing ariſes, and then lay it up for Uſe. When they uſe it, they incorporate with it a third Part of that Oil over the Fire.

The Birdlime that is brought from *Damaſcus* is ſuppos'd to be made of *Sebeſtens*, their Kernels being frequently found in it; but this will not endure either Froſt or Wet.

The Birdlime brought from *Spain* is of an ill Smell.

The Bark of our *Lantone* or *Way faring Shrub*, as it is ſaid, will make Birdlime as good as the beſt.

VITEX; Agnus Caſtus, *or the* Chaſte Tree.

The *Characters* are;

It hath a Flower conſiſting of one Leaf, which appears as if it had two Lips, the Fore-part is tubuloſe; from whoſe Flower-cup riſes the Pointal, which afterwards becomes an almoſt-ſpherical Fruit, which is divided into four Cells, in which are contained oblong Seeds; to which may be added, The Leaves are digitated (or finger'd) like thoſe of Hemp.

The *Species* are;

1. VITEX; *foliis anguſtioribus, cannabis modo diſpoſitis. C. B. P.* The Chaſte Tree, with narrow Leaves.

2. VITEX; *latiore folio. C. B. P.* The Chaſte Tree, with broad ſerrated Leaves.

3. VITEX; *ſive Agnus, flore albido. H. R. Par.* The Chaſte Tree, with whitiſh Flowers.

4. VITEX; *ſive Agnus minor, foliis anguſtiſſimis. H. R. Par.* The leſſer Chaſte Tree, with very narrow Leaves.

The firſt of theſe Plants is pretty common in moſt *Engliſh* Gardens, where a Variety of hardy Trees are preſerv'd;

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break them, for their Shoots are extremely brittle, and very ſubject to ſplit off with the leaſt Violence:) Theſe will take Root in one Year, provided they are water'd in very dry Weather; and may then be tranſplanted out, and manag'd as was directed for thoſe Plants rais'd from Cuttings.

VITIS; The Vine.

The *Characters* are;

The Flower conſiſts of many Leaves, which are placed in a circular Order, and expand in Form of a Roſe; the Ovary, which is ſituated in the Bottom of the Flower, afterwards becomes an oval or round Fruit, which is very full of Juice, and contains many ſmall Stones in each. To which ſhould be added, That the Tree is climbing, ſending forth Claſpers at the Joints, by which it faſtens it ſelf to whatever Plant ſtands near it, and the Fruit is produced in Bunches.

The *Species* are;

1. Vitis; *ſylveſtris Labruſca. C. B. P.* The Wild Vine, *commonly call'd*, the Claret Grape. This Sort of Grape is pretty well known in *England*; it has a Berry of a middling Size, of deep black Colour, covered over with a Bloom like a Plum, which may be wiped off; the Juice ſtains of a deep red Colour, and before it is quite dead-ripe, is of an auſtere Taſte; the Bunches are pretty large, but ſhort, having commonly two Side-Bunches or Shoulders, on the upper part of the Bunch; the Leaves of this Vine are jagged, and change to a deep red Colour before they fall off.

2. Vitis; *præcox, Columellæ. H. R. Par.* This is called in *England* the *July Grape*, but in *France*, *Morillon* and *Vigne haſtive*. This is the earlieſt Grape at preſent known in *England*, for which it is chiefly

preſerved, for it is not much eſteem'd for its Goodneſs: The Skin is thick, the Juice but very indifferent, and the Berries do commonly grow very thin upon the Bunches. Theſe are of a middle Size, and of a dark, muddy, red Colour.

3. Vitis; *Corinthiaca, ſive Apyrina. J. B.* The Corinth Grape, *vulgarly called*, the Currant Grape: Is an early Ripener, the Berry is ſmall and ſlender, the Juice very ſweet, and hath very little Stone. Of this Kind there are two or three different Colours, as *Red*, *Black*, and *Tawny*. This is the Sort which is brought from the Iſlands near the *Morea*, by the Name of Currants, and ſold by the Grocers of *London*, to put into Puddings, *&c.*

4. Vitis; *laciniatis foliis. Cornut.* The Parſley-leav'd Grape, *vulgô*. This Sort was originally brought from *Canada*, where it grows wild in the Woods; and is preſerv'd in the Gardens of the Curious, for the Variety of its fine jagged Leaves. This is a pretty large white Grape, and has a ſweet Juice, but not very vinous; the Berries are very apt to grow thin upon the Bunches, unleſs the Vine is pruned ſhort, and left but thin with Wood.

5. Vitis; *ſubhirſuta. C. P. B.* The Morillon Taconné, *or* Munier, *i. e.* The Miller's Grape; this is called the *Burgundy* in *England*. The Leaves of this Sort are very much powder'd with White, eſpecially in the Spring, when they firſt come out, from whence it had the Name of *Miller's Grape*. It produces middle-ſiz'd black Grapes, which grow cloſe upon the Bunches, and are generally ſhort and thick. This is an excellent Bearer, and a hardy Sort.

6. Vitis; *præcox Columellæ, acinis dulcibus, nigricantibus*. The black Morillon. This is called in *Burgundy*, *Pineau*, and at *Orleans*, *Auverna*. It is a very ſweet Grape, of a middle Size, ſomewhat oval, and of a fine black Colour; the Bunches are ſomewhat longer than thoſe of the former. This makes very good Wine.

7. Vitis; *uvâ peramplâ, acinis albidis, dulcibus, durioribus. Tourn.* The Chaſſelas blanc, Bar-ſur-Aube, White Chaſſelas, *or* Royal Muſcadine. This is a large white Grape, and grows cloſe upon the Bunches, which are alſo very large, and have commonly two ſmall Side-Bunches or Shoulders, produced from the upper Part of the Bunch; the Berries, when full ripe, if well expos'd to the Sun, change to a pale amber Colour, the Juice is very rich, and the Fruit is commonly ripe early in *September*.

8. Vitis; *uva perampla, acinis dulcibus, nigricantibus. Tourn.* The Chaſſelas Noir, *i. e.* The Black Chaſſelas. This is very often called the *Black Muſcadine*. The Berries of this are as large as thoſe of the former, the Bunches are commonly larger, and are ſomewhat later ripe; the Juice is very rich. If well expoſed, they bear well, and are ripe toward the End of *September*.

9. Vitis; *uva perampla, acinis dulcibus rubentibus. Tourn.* The Red Chaſſelas. This is alſo call'd the *Red Muſcadine*. The Berries of this Sort are a little larger than thoſe of the former, and grow much thinner upon the Bunches, are of a faint red Colour, and the Juice is very ſweet, but later ripe, upon which account it is not ſo valuable in *England*.

10. Vitis; *uva perampla, acinis ovatis, albidis. Tourn.* The Burdelais, *vulgarly called* Burlake. The Berries of this Kind are very large, of an oval Shape, and grow pretty cloſe on the Bunches, which are ſometimes of a prodigious Size. I have ſeen a Bunch of theſe Grapes which has weighed five Pounds. But they never ripen in this Country, ſo that they are fit for nothing, except *Verjuce*, or to make *Tarts*.

11. Vitis; *acinis albis, dulciſſimis*; *Vitis Apiana. C. B. P. Garidel.* The Muſcat, *or* White Frontiniac. The Berries of this Kind are large, and grow extremely cloſe upon the Bunches, which are very long, and have commonly two Shoulders to them: The Fruit, when ripe, has a rich, musky Flavour; but it is commonly very late in the Autumn before they ripen, and the Berries being ſo very cloſe upon the Bunches, do detain the Moiſture in their Middles, ſo that they commonly periſh: To prevent which, ſome very curious Perſons look over their Vines, ſoon after the Grapes are formed, and with a Pair of Sciſſers cut out all the ſmall ones, ſo as to leave the others at a moderate Diſtance, whereby the Sun and Air is eaſily admitted, which diſſipates the Moiſture, and prevents their periſhing. This Sort is a great Bearer.

12. Vitis; *acinis rubris, nigricantibus, dulciſſimis. Garidel.* The Muſcat Rouge, *or* Red Frontiniac. The Berries of this Kind are of the Size of the former, but grow much thinner on the Bunches; it is higher flavour'd, and when thorough ripe, is the richeſt Grape yet known. But this muſt have a very dry Soil, and a South-Eaſt Aſpect, otherwiſe it ſeldom ripens well in *England*.

13. Vitis; *acinis nigricantibus, dulciſſimis.* The Black Frontiniac. The Berries of this Kind are leſs than the two former, but are not ſo high flavour'd; their Juice is ſweet, and they are earlier ripe. This is a good Bearer, but the Grapes upon the ſame Bunch do ſeldom ripen at the ſame Time, ſo that they can't be gather'd in full Bunches, but muſt be pick'd off ſingly as they ripen.

14. Vitis; *Damaſcena. H. R. Par.* The Damask Grape. The Berries of this Kind are very large, black, and of an oval Form; the Bunches are very large, and the Vine produces vigorous Shoots. This ripens late in *England*.

15. Vitis; *præcox, acino rotundo, albido, dulci.* The White Sweetwater. The Berries of this Kind are large and white, the Skins are very thin, and the Juice is ſweet; this is very early ripe, but the Berries are apt to be thin upon the Bunches; for it is one of the tendereſt Sorts, when in Flower, that I have yet ſeen; ſo that if there happens bad Weather at that Seaſon, they are very ſubject to blight, and being ſo uncertain in bearing, has render'd it leſs eſteem'd than it was formerly.

16. Vitis; *præcox, acino nigro, dulci & rotundo.* The Black Sweetwater. This is a leſs Grape than the former, it is of a fine black Colour, and grows pretty cloſe upon the Bunches; its Juice is ſweet, and it is early ripe.

17. Vitis; *alba dulcis. J. B.* The white Muſcadine. The Berries of this Kind are large, of a white Colour, and the Juice is very ſweet; the Bunches are long, and it is early ripe.

18. Vitis; *Allobrogica, Plinii. Car. Steph. Præd. Ruſt.* The Raiſin

Grape. This is a large oval Grape of a blackiſh Colour, when ripe; the Bunches are very large, and make a fine Appearance, but never ripen well in *England.* I have known ſome Perſons who had a great Quantity of this Sort of Grape, which they commonly cut in the Middle of *October*, with pretty long Stalks to the Bunches, and hung them on Strings, in Rows, in their Kitchen, at ſuch a Diſtance as not to touch each other; and about *Chriſtmas*, theſe Grapes will be ſo ripen'd by the Warmth of the Room, as to eat extreamly well.

19. VITIS; *acino rubro, duriori, ſapore dulci. Garidel.* The Greek Grape. This is a middle-ſiz'd Grape of a deep red Colour, the Skin is very tough, and the Stones are ſmall; this is by many People call'd the *Brick Grape.* In a kindly Seaſon, when theſe Grapes ripen well, they make excellent Wine; but it muſt have a good Wall, otherwiſe it will not ripen in *England.*

20. VITIS; *pergulana, uva perampla, acino oblongo, duro, majori & ſubviridi. Garidel.* The Pearl Grape, called in *Provence*, Pendoulau, *or* Rin de Ponſo. This is a large, oblong Grape, of a greeniſh white Colour, the Juice has a Mixture of Sweet and Sour, and it is late ripe.

21. VITIS; *uva perampla, acinis nigricantibus, majoribus.* The St. Peter's Grape, *or* Heſperian. The Berries of this Sort are very large, round, and of a deep black Colour when ripe; the Bunches are very large, and have two Shoulders to them; the Juice is very rich, and a little ting'd with Red; the Leaves of this Sort are remarkably jagged, ſo as to be known when there is no Fruit upon the Vines; it is late ripe. I believe this is the ſame Sort which the *French* call *Gros Noir d' Eſpagne*, i. e. *Great Black Spaniſh.*

22. *La Malvoſe*, i. e. the *Malmſey Grape*; is a middle-ſiz'd Fruit, of a muddy red Colour, its Juice is very rich and ſoft, the Bunches are large, and it is a great Bearer; this ripens toward the latter end of *September.*

23. *Malvois Muſquée*, i. e. the *Malmſey Muſcadine.* This is a middle-ſiz'd Grape, rather long than round, of a rich, musky Flavour when ripe. This is one of the Sorts of Grapes from which the *Madera* Wine is made. It ripens late in *England.*

24. The *Red Hamburgh Grape.* The Berries of this Kind are large, and of a reddiſh Colour, covered with a Flew; the Bunches are large, and it is a good Bearer. This ripens toward the End of *September*, and is a fine Grape. It was brought into *England* by Mr. *Warner* of *Rotherhith*, who hath ſupply'd many curious Perſons with it.

25. The *Black Hamburgh*, or *Warner Grape.* This has a middle-ſiz'd Berry, rather long than round, of a fine black Colour, when ripe; the Juice is very rich, ſomewhat inclining to a musky Flavour. This ripens about the Middle of *September.* It was brought into *England* by Mr. *Warner*, with the former.

26. *Raiſin Swiſſe*, i. e. the *Switzerland Grape.* This is preſerved only as a Curioſity; the Fruit of this Kind are ſtrip'd with White and Black, and ſometimes divided into Quarters of thoſe Colours, and many times half the Bunch is white, and the other half black, and ſome intire Bunches are white, and others black, ſo that it appears as if two Kinds had been grafted on the ſame

. The Fruit is good for little, hew, therefore one Plant of Kind is enough in a Garden.

ſide thoſe here mention'd, there great Variety of other Sorts, h are the Produce of warmer tries, ſome of which have introduced lately into *England*; s it is uncertain at preſent, theſe will ripen in this Cli- I thought it proper to omit ioning them in this Place; be- it is very probable, that many em may prove the ſame we y have, under different Names; theſe Fruits are brought from ent Countries, ſo they ſeldom with the ſame Names; and this haſty Temper to increaſe Number of Sorts, which has unded the preſent Catalogues uits.

the Sorts of *Vines* are propa- either from Layers or Cuttings, ormer of which is greatly is'd in *England*, but the latter hat I would recommend, as much preferable to the other.

he Roots of *Vines* do not grow g and woody, as in moſt Sorts ees, but are long, ſlender, and ; ſo that when they are taken f the Ground, they ſeldom out again, but ſhrivel and dry, at they rather retard than help lants in their Growth, by pre- ng the new Fibres from puſhing for which reaſon I had rather a good Cutting than a rooted , provided it be well choſen, here is leſs Danger of its not ing.

t as there are few Perſons who Choice of proper Cuttings, leaſt that do form their Cut- rightly, in *England*, ſo it will roper to give Directions for Work in the firſt Place, before oceed. You ſhould always make Choice of ſuch Shoots as are ſtrong and well ripened of the laſt Year's Growth; theſe ſhould be cut from the old *Vine*, juſt below the Place where they were produced, taking a Knot of the Two-years Wood, which ſhould be pruned ſmooth; then you ſhould cut off the upper Part of the Shoot, ſo as to leave the Cutting about ſixteen Inches long: Now, in making the Cuttings after this manner, there can be but one taken from each Shoot; whereas moſt Perſons cut them into Lengths of about a Foot, and plant them all, which is very wrong; for the upper Part of the Shoots are never ſo well ripen'd as the lower Part which was produced early in the Spring; ſo that if they do take Root, they never make ſo good Plants, for the Wood of thoſe Cuttings being ſpungy and ſoft, admits the Moiſture too freely, whereby the Plants will be luxuriant in Growth, but never ſo fruitful as ſuch whoſe Wood is cloſer and more compact.

When the Cuttings are thus prepared, they ſhould be placed with their lower Part into the Ground, in a dry Place, laying ſome Litter about their upper Parts, to prevent them from drying; in this Situation they may remain until the Beginning of *April*, (which is the beſt Time for planting them) when you ſhould take them out, and waſh them from the Filth they have contracted; and if you find them very dry, you ſhould let them ſtand with their lower Parts in Water, ſix or eight Hours, which will diſtend their Veſſels, and diſpoſe them for taking Root. Then ſet about preparing the Ground where the Plants are deſigned to remain, (whether againſt Walls or for Standards) for they ſhould not be removed again.

But as I intend hereafter to treat in particular about the Planting and Management of *Vineyards*, ſo in this Place I ſhall confine myſelf only to ſuch as are planted either againſt Walls or Pales, for eating.

In preparing the Ground, you ſhould conſider the Nature of the Soil, which, if ſtrong and inclinable to Wet, is by no means proper for Grapes; but where it thus happens, you ſhould open a Trench againſt the Wall, which ſhould be fill'd with Lime Rubbiſh, the better to drain off the Moiſture, then raiſe the Border with freſh, light Earth, about a Foot thick, ſo that it may be at leaſt a Foot above the Level of the Ground; then you ſhould open the Holes about ſix Feet Diſtance from each other, putting one good ſtrong Cutting into each Hole, which ſhould be laid a little ſloping, that their Tops may incline to the Wall; but muſt be put in ſo deep, that the uppermoſt Eye may be level with the Surface of the Ground: for when there are two or three Eyes left above Ground, as is the common Method uſed by the *Engliſh* Gardeners, they do all attempt to ſhoot, ſo that the Strength of the Cuttings is divided to nouriſh ſo many Shoots, whereas on the contrary, it is all employ'd on one ſingle Shoot, which conſequently will be much ſtronger; beſides, the Sun and Air is apt to dry that Part of the Shoots which remains above Ground, and ſo often prevents their Buds from ſhooting.

Then, having placed the Cutting into the Hole, you ſhould fill up the Hole gently, preſſing down the Earth with your Foot, and raiſe a little Hill juſt upon the Top of the Cutting, to cover the upper Eye quite over, which will prevent it from drying This being done, there is nothing more neceſſary, than to keep the Ground clear from Weeds, until the Cuttings begin to ſhoot, at which time you ſhould look over them carefully, to rub off any dangling Shoots, if ſuch are produced, and faſten the main Shoot to the Wall; which ſhould be conſtantly faſtened up, as it is extended in Length, to prevent its breaking or hanging down. You muſt continue alſo, during the Summer Seaſon, conſtantly rubbing off all lateral Shoots which are produced, leaving only the firſt main Shoot; and be ſure to keep the Ground conſtantly clear from Weeds, which, if ſuffer'd to grow, will exhauſt the Goodneſs of the Soil, and ſtarve the Cuttings.

The *Michaelmas* following, if your Cuttings have produced ſtrong Shoots, you ſhould prune them down to two Eyes, (which, tho' by ſome People may be thought too ſhort, yet I am ſatisfied, from ſeveral Experiments, to be the beſt Method): The Reaſon for adviſing the pruning the *Vines* at this Seaſon, rather than deferring it till Spring, is, becauſe the tender Parts of thoſe young Shoots, if left on, are ſubject to decay in Winter, and imbibe ſome noxious Matter from the Air, which greatly weakens their Roots; ſo that if they are cut off early in Autumn, the Wounds will heal over before the bad Weather, and thereby the Roots will be greatly ſtrengthened.

In the Spring, after the cold Weather is paſt, you muſt gently dig up the Borders, to looſen the Earth; but you muſt be very careful in the doing of this, not to injure the Roots of your *Vines*; you ſhould alſo raiſe the Earth up to the Stems of the Plants, ſo as to cover the old Wood, but not ſo deep as to

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e third Seaſon you muſt go
he *Vines* again, ſo ſoon as they
to ſhoot, rubbing off all Danglers, as before, and training in the leading Shoots, (which this Seaſon may be ſuppoſed to be two from each Shoot of the laſt Year's Wood; but if they attempt to produce two Shoots from one Eye, the weakeſt of them muſt be rubbed off, for there ſhould never be more than one allowed to come out of at Eye). If any of them produce Fruit, as many times they will the third Year, you ſhould not ſtop them, (ſo ſoon as is generally practiſed upon the bearing Shoots of old *Vines*) but permit them to ſhoot forward till *Midſummer*, at which time you may pinch off the Tops of the Shoots, for if this were done too ſoon, it would ſpoil the Buds for the next Year's Wood, which in young *Vines* muſt be carefully preſerved, becauſe there are no Shoots laid in on purpoſe for Wood, as is commonly practis'd on old *Vines*.

During this Summer you muſt conſtantly go over your *Vines*, and diſplace all weak, lateral Shoots as they are produced, and carefully keep the Ground clear from Weeds, (as was before directed) that the Shoots may ripen well, which is a material thing to be obſerved in moſt Sorts of Fruit-Trees, but eſpecially in *Vines*; which ſeldom produce any Fruit from immature Branches. Theſe things being duly obſerved, are all that is neceſſary in the Management of young *Vines*. I ſhall therefore proceed to lay down Rules for the Government of grown *Vines*, which I ſhall do as briefly as poſſible. And,

Firſt, *Vines* do rarely produce any Bearing-Shoots from Wood that is more than one Year old; therefore great Care ſhould be taken to have ſuch Wood in every Part of the Trees; for the Fruit are always produced upon Shoots, which come out from the Buds of the laſt Year's Wood, ſo that is always upon the ſame Year's Shoots. The Method commonly practis'd by the Gardeners in *England*, is, to ſhorten the Branches of the former Years Growth, down to three or four Eyes, at the Time of pruning; tho' there are ſome Perſons who leave theſe Shoots four or five Eyes long, and affirm, that by this Practice they obtain a greater Quantity of Fruit: But this is very wrong, ſince it is impoſſible that one Root can nouriſh forty or fifty Bunches of Grapes, ſo well as it can ten or twelve; ſo that what is gotten in Number is loſt in their Magnitude; beſides, the greater Quantity of Fruit there is left on *Vines*, the later they are ripen'd, and their Juice is not ſo rich. And this is well known in the Wine Countries, where there are Laws enacted, to direct the Quantity of Shoots, and the Number of Eyes that thoſe are to have upon each Root, leſt by over-bearing them, they not only exhauſt and weaken the Roots, but thereby render the Juice weak, and ſo deſtroy the Reputation of their *Wine*.

Wherefore, the beſt Method is, to leave their Bearing-Shoots about four Eyes in Length, (becauſe the lowermoſt never produce) and three Buds are ſufficient, for each of theſe will produce two or three Bunches; ſo that from each of thoſe Shoots there may be expected ſix or eight Bunches, which is a ſufficient Quantity. Theſe Shoots muſt be laid in about eighteen Inches aſunder, for if they are cloſer, when the Side-Shoots are produced, there will not be Room enough to train them in againſt the Wall, which ſhould always be obſerved; and as their Leaves are very large, ſo the Branches ſhould be left at a proportionable Diſtance, that they may not crowd or ſhade each other.

In Pruning, you ſhould always obſerve to make the Cut juſt above an Eye, ſloping it backward from it, that if it ſhould bleed, the Sap might not flow upon the Bud: And where there is an Opportunity of cutting down ſome young Shoots to two Eyes, in order to produce vigorous Shoots for the next Year's Bearing, it ſhould always be done; becauſe in ſtopping of thoſe Shoots which have Fruit upon them in *May*, it often ſpoils the Eyes for Bearing; and this reſerving of new Wood, is what the *Vignerons* abroad do always practiſe in their Vineyards. The beſt Seaſon for pruning of *Vines* is the End of *September*, or the Beginning of *October*, for the Reaſons before laid down.

The latter End of *April*, or the Beginning of *May*, when the *Vines* begin to ſhoot, you muſt carefully look them over, rubbing off all ſmall Buds which may come from the old Wood, which do only produce weak dangling Branches; as alſo when two Shoots are produc'd from the ſame Bud, the weakeſt of them ſhould be diſplaced, which will cauſe the others to be the ſtronger; and the ſooner this is done, the better it is for the *Vines*.

In the Middle of *May*, you muſt go over them again, rubbing off all the dangling Shoots as before, and at the ſame Time you muſt nail up all the ſtrong Branches, ſo that they may not hang from the Wall; for if their Shoots hang down, their Leaves will be turn'd the wrong Way; which when the Shoots are afterwards nail'd upright, will have their back Surface upward; and until the Leaves are turn'd again, and have taken their right Direction, the Fruit will not thrive: So that the not obſerving this Management, will cauſe the Grapes to be a Fortnight later before they ripen. Beſides, by ſuffering the Fruit to hang from the Wall, and be ſhaded with the Cloſeneſs of the Branches, it is greatly retarded in its Growth: Therefore, during the growing Seaſon, you ſhould conſtantly look over the *Vines*, diſplacing all dangling Branches and wild Wood, and faſten up the other Shoots regularly to the Wall, as they are extended in Length; and towards the latter End of *May*, you ſhould ſtop the Bearing-Branches, which will ſtrengthen the Fruit, provided you always leave three Eyes above the Bunches; for if you ſtop them too ſoon, it will injure the Fruit, by taking away that Part of the Branch which is neceſſary to attract the Nouriſhment of the Fruit, as alſo to perſpire off the Crudities of the Sap, which is not proper for the Fruit to receive.

But although I recommend the ſtopping thoſe Shoots which have Fruit at this Seaſon, yet you ſhould by no means ſtop thoſe which are intended for bearing the next Year, before the Beginning of *July*, leſt by ſtopping them too ſoon, you cauſe the Eyes to ſhoot out ſtrong lateral Branches, whereby they will be greatly injured. Theſe therefore ſhould be train'd upright againſt the Wall until that Time; when their Tops may be nipp'd off, to give Strength to the lower Buds.

During the Summer Seaſon, you ſhould be very careful to rub off all dangling Branches, and train up the Shoots regularly to the Wall, which will greatly accelerate the Growth of the Fruit; and alſo admit the Sun and Air to them, which is abſolutely neceſſary to ripen, and give the Fruit a rich Flavour; but you muſt never diveſt the Branches of their Leaves, as is the Practice of ſome Perſons; for altho' the admiting of the Sun is neceſſary to ripen them, yet if they are too much expos'd thereto, their Skins will be tough, and they will rarely ripen: Beſides, the Leaves being abſolutely neceſſary to nouriſh the Fruit by taking them off, the Fruit is ſtarv'd, and ſeldom comes to any Size, as I have ſeveral times obſerv'd; therefore a great Regard ſhould be had to the Summer Management of the *Vines*, where Perſons are deſirous to have their Fruit excellent and duly ripen'd.

When the Fruit are all gather'd, you ſhould prune the *Vines*, whereby the Litter of their Leaves will be intirely remov'd at once, and the Fruit will be the forwarder the ſucceeding Year, as has been before obſerv'd,

Having thus treated of the Management of *Vines* againſt Walls, *&c.* I come next to the Culture of ſuch as are planted in Vineyards.

Of Vineyards in England.

There have of late Years been but very few Vineyards in *England*, tho' they were formerly very common, as may be gather'd from the ſeveral Places in divers Parts of *England*, which yet retain that Name; as alſo from antient Records, which teſtify the Quantities of Ground which were allotted for Vineyards, to Abbeys and Monaſteries for Wine for the Uſe of the Inhabitants: But as to the Quality of the Wines which were then produc'd in *England*, we are at preſent ignorant; and how theſe Vineyards were rooted up, and became ſo generally neglected, we have no very good Accounts left. Whatever might be the Cauſe of this total Neglect in cultivating *Vines* in *England*, I won't pretend to determine; but ſuch was the Prejudice moſt People conceiv'd to any Attempts of producing Wine in *England*, that, for ſome Ages paſt, every Trial of that kind has been ridicul'd by the Generality of People; and at this Day very few Perſons will believe it poſſible to be effected.

Indeed if we judge only by the Succeſs of ſome modern Eſſays made near *London*, where ſmall Vineyards have been planted a few Years paſt, there would be no great Incouragement to begin a Work of this kind, becauſe the Produce of very few of theſe Vineyards has been ſo kindly as were to be wiſh'd. But however this ſhould not deter others from making farther Trials, eſpecially when they conſider the many Diſadvantages which moſt or all of theſe Plantations are attended with: For firſt, there is ſcarce one of them plac'd upon a proper Soil and Situation for this Purpoſe; and ſecondly, there is not one which is rightly planted and managed, as I ſhall preſently ſhew: And how can we expect Succeſs from Vineyards under theſe Diſadvantages, when even in *France* or *Italy* they would ſucceed little better, if their Management were not directed with more Judgment? I ſhall therefore humbly offer my Opinion, which is founded upon ſome Trials I have ſeen made, and from the Inſtructions which I have receiv'd from ſeveral curious Perſons abroad, who cultivate Vineyards for their own Uſe and that of their Friends, and who have been very exact in obſerving the ſeveral Methods in Practice amongſt the *Vignerons* of thoſe Countries; from whence it is hop'd, that the Prejudice which moſt People have againſt a Project of this kind, will either be remov'd, or at leaſt ſuſpended, until Trials have been judiciouſly made of this Affair.

The firſt and great Thing to be conſider'd in planting Vineyards is, the Choice of *Soils* and *Situations*; which, if not rightly choſen, there will be little Hopes of Succeſs; for upon this the whole Affair greatly depends. The beſt Soil for a Vineyard in *England*, is ſuch whoſe Surface is a light, ſandy Loam, and not above a Foot deep above the Gravel or Chalk, either of which Bottoms are equally good for *Vines*: But if the Soil is deep, or the Bottom either Clay or a ſtrong Loam, it is by no means proper for this Purpoſe; for altho' the *Vines* may ſhoot vigorouſly, and produce a great Quantity of Grapes, yet theſe will be later ripe, fuller of Moiſture, and ſo conſequently their Juice not mature nor well digeſted, but will abound with Crudity, which in Fermenting will render the Wine ſour and ill-taſted; which is the common Complaint of thoſe who have made Wine in *England*.

Nor is a very rich, light, deep Soil, ſuch as is commonly found near *London*, proper for this Purpoſe, becauſe the Roots of theſe *Vines* will be inticed down too deep to receive the Influences of *Sun* and *Air*, and hereby will take in much crude Nouriſhment, whereby the Fruit will be render'd leſs valuable, and be later ripe, which is of ill Conſequence to theſe Fruits, which are known to imbibe a great Share of their Nouriſhment from the Air, which if replete with Moiſture (as is commonly

monly the Caſe in Autumn) muſt neceſſarily contribute greatly to render the Juices leſs perfect: Therefore great Care ſhould be had to the Nature of the Soil upon which they are planted.

The next Thing neceſſary to be conſider'd is, the Situation of the Place; which, if poſſible, ſhould be on the *North* Side of a River, upon an Elevation inclining to the *South*, with a ſmall gradual Deſcent, that the Moiſture may the better drain off; but if the Ground ſlopes too much, it is by no means proper for this Purpoſe: but if at a Diſtance from this Place, there are larger Hills which defend it from the *North* and *North-Weſt* Winds, it will be of great Service, becauſe hereby the *Sun's* Rays will be reflected with a greater Force, and the cold Winds being kept off, will render the Situation very warm. Add to this, a chalky Surface (which if thoſe Hills do abound with, as there are many Situations in *England* which do) it will ſtill add to the Heat of the Place by reflecting a greater Quantity of the *Sun's* Rays.

The Country about this ſhould be open and hilly; for if it be much planted, or low and boggy, the Air will conſtantly be fill'd with moiſt Particles, occaſion'd by the plentiful Perſpiration of the Trees, or the Exhalations from the adjoining Marſhes, whereby the Fruit will be greatly prejudic'd (as was before obſerv'd.) Theſe Vineyards ſhould always be open to the *Eaſt*, that the Morning Sun may come on 'em to dry off the Moiſture of the Night early, which by lying too long upon the *Vines*, does greatly retard the Ripening of their Fruit, and renders it crude and ill-taſted:. And ſince the Fruit of *Vines* are rarely ever injur'd by *Eaſterly* Winds, ſo there will be no Reaſon to apprehend any Danger from ſuch a Situation; the *South-Weſt*, *North-Weſt*, and *North* Winds being the moſt injurious to Vineyards in *England* (as indeed they are to moſt other Fruit) ſo that, if poſſible, they ſhould be ſhelter'd therefrom. Having made Choice of a Soil and Situation proper for this Purpoſe, the next thing to be done, is to prepare it for Planting. In doing of which, the following Method ſhould be obſerv'd: In the Spring it ſhould be plough'd as deep as the Surface will admit, turning the Sward into the Bottom of each Furrow; then it ſhould be well harrow'd to break the Clods, and cleanſe it from the Roots of noxious Weeds: and after this, it muſt be conſtantly kept plough'd and harrow'd for at leaſt one Year, to render the Surface light, and hereby it will be render'd fertile by imbibing the nitrous Particles of the Air (eſpecially if it be long expos'd thereto before it is planted:) Then in *March* the Ground ſhould be well plough'd again; and after having made the Surface pretty even, the Rows ſhould be mark'd out from *South-Eaſt* to *North-Weſt*, at the Diſtance of ten Feet from each other; and theſe Rows ſhould be croſs'd again at five or ſix Feet Diſtance, which will mark out the exact Places where each Plant ſhould be plac'd, ſo that there will be ten Feet Row from Row, and five or ſix Feet aſunder in the Rows, nearer than which they ought never to be planted. And herein moſt People who have planted Vineyards, have greatly err'd, ſome having allowed no more than five Feet Row from Row, and the Plants but three Feet aſunder in the Rows: And others, who think they have been full liberal in this Article, have only planted their *Vines* at ſix Feet Diſtance every Way; but neither of theſe have allow'd a proper Diſtance to them, as I ſhall ſhew: For in the firſt Place, where the Rows are plac'd too cloſe, there will not be Room for the Sun and Air to paſs in between them to dry up the Moiſture, which being detain'd amongſt the *Vines*, muſt produce very ill Effects. And ſecondly, where the *Vines* are plac'd in exact Squares, ſo near together as ſix Feet, there can be no Room for the Current of Air to paſs between them, when their Branches are extended on each Side, and ſo conſequently the Damps in Autumn will be entangled and detain'd amongſt the *Vines*, to the great Prejudice of their Fruit. For ſince the Autumns in *England* are often attended with Rains, cold Dews, or Fogs, ſo all proper Care ſhould be taken to remove every thing which may obſtruct the drying up the Damps which ariſe from the Ground.

The ſkilful *Vignerons* abroad are alſo ſenſible how much it contributes to the Goodneſs of their *Vines* to allow a large Space between the Rows; and therefore where the Quality of the Wine is more regarded than the Quantity, there they never plant their *Vines* at leſs than ten Feet Row from Row, and ſome do allow twelve. It was an Obſervation of *Bellonius*, almoſt two hundred Years ſince, that in thoſe Iſlands of the *Archipelago*, where the Rows of *Vines* were plac'd at a great Diſtance, the Wine was much preferable to thoſe which were cloſe planted; and this he poſitively affirms to be the Caſe in moſt Countries where he had travell'd. Indeed, we need not have Recourſe to Antiquity for the Truth of ſuch Facts, when we are daily convinc'd of this Truth in all cloſe Plantations of any kind of Fruit, where it is conſtantly obſerv'd, that the Fruits in ſuch Places are never ſo well colour'd, ſo early ripe, nor near ſo well flavour'd as thoſe produc'd on Trees, where the Air can freely circulate about them, and the Rays of the Sun have free Acceſs to the Branches, whereby their Juices are better prepar'd before they enter the Fruit.

Having thus conſider'd the Diſtance which is neceſſary to be allow'd to theſe Plants, we come next to the Planting: But in order to this, the proper Sorts of Grapes ſhould be judiciouſly choſen; and in this Particular we have egregiouſly erred in *England*; all the *Vineyards* at preſent planted here, are of the ſweeteſt and beſt Sort of Grapes for Eating, which is contrary to the general Practice of the *Vignerons* abroad, who always obſerve that ſuch Grapes do never make good Wine, and therefore, from Experience, do make Choice of thoſe Sorts of Grapes, whoſe Juice, after Fermenting, affords a noble, rich Liquor; which Grapes are always obſerv'd to be auſtere, and not by any means palatable. This is alſo agreeable to the conſtant Practice of our Cyder-makers in *England*, who always obſerve, that the beſt Eating Apples make but poor Cyder; whereas the more rough and auſtere Sorts, after being preſs'd and fermented, do afford a ſtrong vinous Liquor. And I believe it will be found true in all Fruits, that where the natural Heat of the Sun ripens and prepares their Juices, ſo as to render them palatable, whatever Degree of Heat theſe Juices have more, either by Fermentation, or from any other Cauſe, will render them weaker and leſs ſpirituous. Of this we have many Inſtances in Fruits; for if we tranſplant any of our Summer or Autumn Fruits, which ripen perfectly in *England* without the Aſſiſtance of Art, into a Climate a few Degrees warmer, theſe Fruits will be mealy and inſipid: So likewiſe if we bake or ſtew any of theſe Fruits, they will be good for little, loſing all their Spirit and Flavour by the additional Heat of the Fire; and ſuch Fruits as are by no means eatable raw, are hereby render'd exquiſite, which if tranſplanted into a warmer Climate, have, by the additional Heat of the Sun, been alſo alter'd ſo as to exceed the moſt delicious of our Fruit in this Country.

From whence it is plain, that thoſe Grapes which are agreeable to the Palate for Eating, are not proper for Wine; in making of which, their Juices muſt undergo a ſtrong Fermentation. Therefore ſince we have in *England* been only propagating the moſt palatable Grapes for Eating, and neglected the other Sorts, before we plant Vineyards, we ſhould take Care to be provided with the proper Sorts from abroad; which ſhould be choſen according to the Sort of Wines intended to be imitated: Tho' I believe the moſt probable Sort to ſucceed in *England* is the *Auvernat* or true *Burgundy Grape* (which whatever ſome Perſons may pretend, is, at preſent, very rare, in *England*, moſt People taking the *Munier Grape* for the *Burgundy:)* This Sort of Grape is moſt preferr'd in *Burgundy*, *Champaign*, *Orleans*, and moſt of the other Wine Countries in *France*; and I am inform'd, that it ſucceeds very well in ſeveral Places to the North of *Paris*, where proper Care is taken of its Management: So that I ſhould adviſe ſuch Perſons who would try the Succeſs of Vineyards in *England*, to procure Cuttings of this Grape from thoſe Countries; but herein ſome Perſon of Integrity and Judgment ſhould be imploy'd to get them from ſuch Vineyards where no other Sorts of Grapes are cultivated, which is very rare to find, unleſs in ſome particular Vineyards of the Citizens, who are very exact to keep up the Reputation of their Wines; nothing being more common than for the *Vignerons* to plant three or four Sorts of Grapes in the ſame Vineyard, and at the Time of Vintage to mix them all together, which renders their Wines leſs delicate than in ſuch Places where they have only this one true Sort of Grape. And here I would caution every one againſt mixing the Juice of more Grapes than one Sort, which will cauſe it to ferment at different Times, and in different Manners.

The Cuttings being thus provided (for I would always prefer theſe to Layers, or rooted Plants, for the Reaſons given at the Beginning of the Article *Vitis)* about the Beginning of *April* is the beſt Seaſon for Planting; when it will be proper to put the lower Ends of the Cuttings in Water about three Inches, ſetting them upright for ſix or eight Hours before they are us'd; then at the Center of every croſs Mark already made by a Line, to the Diſtance the *Vines* are deſign'd, ſhould be a Hole made with a Spade or other Inſtrument, about a Foot deep: into each of which ſhould be put one ſtrong Cutting, placing it a little ſloping, then the Hole ſhould be fill'd up with Earth, preſſing it gently with the Feet to the Cutting, and raiſing a little Hill to each about three Inches, ſo as to juſt cover the uppermoſt Eye or Bud, which will prevent the Wind and Sun from drying any Part of the Cuttings, and this upper Eye only will ſhoot, the under ones moſt of them will puſh out Roots; ſo that this Shoot will be very ſtrong and vigorous.

After they are thus planted, they will require no other Care until they ſhoot, except to keep the Ground clear from Weeds, which ſhould be conſtantly obſerv'd: But as to Watering, or any other Trouble, there will be no Occaſion for it, notwithſtanding what ſome People have directed; for in *England* there is no Danger of their miſcarrying by Drought. When the Cuttings begin to ſhoot, there ſhould be a ſmall Stick of about three Feet long ſtuck down by each, to which the Shoots ſhould be faſten'd to prevent their breaking or lying upon the Ground, ſo that as the Shoots advance, the Faſtening ſhould be renew'd, and all ſmall lateral Shoots (if there are any ſuch produc'd) ſhould be conſtantly diſplac'd, and the Ground between the *Vines* always kept clean. This is the whole Management which is requir'd the firſt Summer.

But at *Michaelmas*, when the *Vines* have done ſhooting, they ſhould be prun'd; for if they are left unprun'd till Spring, their Shoots being tender (eſpecially towards their upper Parts) will be in Danger of ſuffering, if the Winter ſhould prove ſevere.

This Pruning is only to cut down all the Shoots to two Eyes; and if after this is done, the Earth be drawn up in a Hill about each Plant, it will ſtill be a greater Defence againſt Froſt.

At the Beginning of *March*, the Ground between the *Vines* ſhould be well dug, to looſen it, and render it clean, but you ſhould be careful not to dig deep cloſe to the *Vines*, leſt thereby their Roots ſhould be cut or bruis'd; and at the ſame time the Earth ſhould be again laid up in a Hill about each Plant, but there muſt be Care taken not to bury the two young Eyes of the former Year's Shoot, which were left to produce new Wood.

At the Beginning of *May*, when the *Vines* are ſhooting, there ſhould be ſome Stakes fix'd down to the Side of each Plant, which muſt be ſomewhat taller and ſtronger than thoſe of the former Year; to theſe the two Shoots (if ſo many are produc'd) ſhould be faſten'd, and all the ſmall trailing or lateral Shoots ſhould be conſtantly diſplac'd, that the other Shoots may be ſtronger; and the Ground ſhould alſo be kept very clear from Weeds, as before.

At *Michaelmas* theſe *Vines* ſhould be prun'd again, in the following Manner. Thoſe of them which have produc'd two ſtrong Shoots of equal Vigour, muſt be cut down to three Eyes each; but ſuch which have one ſtrong Shoot and a weak one, the ſtrong one muſt be ſhorten'd to three Eyes, and the weak one to two; and ſuch *Vines* which have produc'd but one ſtrong Shoot, ſhould be ſhorten'd down to two Eyes alſo, in order to obtain more Wood againſt the ſucceeding Year.

In the Spring, about the Beginning of *March*, the Ground between the *Vines* ſhould be again dug, as before, and two Stakes ſhould be plac'd down by the Side of all ſuch *Vines* as have two Shoots, at ſuch Diſtance on each Side of the Plant as the Shoots will admit to be faſten'd thereto; and the Shoots ſhould be drawn out on each Side to the Stakes, ſo as to make an Angle of about forty-five Degrees with the Stem, but by no means ſhould they be bent down horizontally, as is by ſome practis'd, for the Branches lying too near the Earth are greatly injur'd by the Damps which ariſe from thence, but eſpecially when they have Fruit, which is never ſo well taſted, nor ſo early ripe upon thoſe Branches, as when they are a little more elevated.

In *May*, when the *Vines* begin to ſhoot, they muſt be carefully look'd over, and all the weak dangling Shoots ſhould be rubb'd off as they are produc'd, and thoſe Shoots which are produc'd from ſtrong Eyes, ſhould be faſten'd to the Stakes to prevent their being broke off by the Wind. This Management ſhould be repeated at leaſt every three Weeks, from the Beginning of *May* to the End of *July*; by which Means, the Shoots which are train'd up for the ſucceeding Year will not only be ſtronger, but alſo better ripen'd and prepar'd for Bearing, becauſe they will have the Advantage of Sun and Air, which is abſolutely neceſſary to prepare their Juices; whereas, if they are crowded by a Number of ſmall dangling weak Branches, they will ſhade and exclude the Rays of the Sun from the other Shoots, and ſo by detaining the Moiſture a longer time amongſt the Branches, occaſion the Veſſels of the young Wood to be of a larger Dimenſion, and hereby the crude Juice finds an eaſy Paſſage thro' them; ſo that the Shoots in Autumn ſeem to be moſtly Pith, and are of a greeniſh immature Nature; and where-ever this is obſerv'd, it is a ſure Sign of a bad Quality in the *Vines*.

The Soil alſo ſhould be conſtantly kept clean, becauſe if there are any Vegetables (either Weeds or Plants of other Kinds) growing between the *Vines*, it will detain the Dews longer, and by their Perſpiration occaſion a greater Moiſture than would be if the Ground were intirely clear; ſo that thoſe who plant other Things between their Rows of *Vines*, are guilty of a great Error.

At *Michaelmas* the *Vines* ſhould be prun'd, which Seaſon I approve of rather than the Spring (for Reaſons given already;) and this being the third Year from planting, the *Vines* will begin to produce Fruit, therefore they muſt be prun'd accordingly. Now ſuppoſe the two Shoots of the former Year, which were ſhorten'd to three Eyes, have each of them produc'd two ſtrong Branches the Summer paſt, then the uppermoſt of theſe Shoots upon each Branch ſhould be ſhorten'd down to three good Eyes (never including the lower Eye, which is ſituate juſt above the former Year's Wood, which ſeldom produces any thing except a weak dangling Shoot;) and the lower Shoots ſhould be ſhorten'd down to two good Eyes each; theſe being deſign'd to produce vigorous Shoots for the ſucceeding Year, and the former are deſign'd to bear Fruit: But where the *Vines* are weak, and have not produc'd more than two or three Shoots the laſt Seaſon, there ſhould be but one of them left with three Eyes for Bearing, the reſt muſt be ſhorten'd down to two, or if weak, to one good Eye, in order to obtain ſtrong Shoots the following Summer; for there is nothing more injurious to *Vines* than the leaving too much Wood upon them, eſpecially while they are young, or the over-bearing them, which will weaken 'em ſo much, as not to be recover'd again to a good State in ſeveral Years, tho' they ſhould be manag'd with all poſſible Skill.

In *March* the Ground between the *Vines* ſhould be well dug, obſerving not to injure their Roots by digging too deep near them; but where there are ſmall horizontal Roots produc'd, on or near the Surface of the Ground, they ſhould be prun'd off cloſe to the Place where they were produc'd; theſe being what the *Vignerons* call Day Roots, and are by no means neceſſary to be left on: And after having dug the Ground, the Stakes ſhould be plac'd down in the following manner: On each Side of the *Vine* ſhould be a Stake, put in at about ſixteen Inches from the Root, to which the two Branches, which were prun'd to three Eyes each, for Bearing, ſhould be faſten'd (obſerving, as was before directed, not to draw them down too horizontally;) then another taller Stake ſhould be plac'd down near the Foot of the *Vine*, to which the two Shoots, which were prun'd down to two Eyes, ſhould be faſten'd, provided they are long enough for that Purpoſe; but if not, when their Eyes begin to ſhoot, theſe muſt be train'd upright to the Stakes, to prevent their trailing on the Ground, or being broke by the Wind.

In *May* the *Vines* ſhould be carefully look'd over again, at which Time all weak lateral Branches ſhould be rubb'd off as they are produc'd, and thoſe Shoots which ſhew Fruit, muſt be faſten'd with Baſs to the Stakes to prevent their being broke, until they are extended to three Joints beyond the Fruit, where they ſhould be ſtopp'd: But the Shoots which are deſign'd for Bearing the following Seaſon, ſhould be kept train'd upright to the middle Stake; by which Method the Fruit-Branches will not ſhade theſe middle Shoots, nor will the middle Shoots ſhade the Fruit; ſo that each will enjoy the Benefit of Sun and Air.

This Method ſhould be repeated every Fortnight or three Weeks, from the Beginning of *May* to the Middle or latter End of *July*, which will always keep the Shoots in their right Poſition, whereby their Leaves will not be inverted, which greatly retards the Growth of the Fruit, and by keeping the *Vines* conſtantly clear from horizontal Shoots, the Fruit will not be crowded with Leaves and ſhaded, but will have conſtantly the Advantage of Sun and Air equally, which is of great Conſequence; for where the Fruit is cover'd with theſe dangling Shoots in the Spring, and are afterwards expos'd to the Air, either by diveſting theſe of their Leaves, or elſe diſplacing their Branches intirely, as is often practis'd, the Fruit will become hard, and remain at a perfect Stand for three Weeks, and ſometimes will never advance afterwards, as I have ſeveral times obſerv'd; therefore there cannot be too much Care taken to keep them conſtantly in a kindly State of Growth, as the *Vignerons* abroad well know, tho' in *England* it is little regarded by the Generality of Gardeners, who, when their Grapes ſuffer by this Neglect, immediately complain of the Climate, or the Untowardneſs of the Seaſon, which is too often a Cover for Neglects of this Nature:

And here I can't help taking Notice of the abſurd Practice of thoſe who pull off their Leaves from their *Vines*, which are plac'd near the Fruit, in order to let in the Rays of the Sun to ripen them; not conſidering how much they expoſe their Fruit to the Cold Dews, which fall plentifully in Autumn, which being imbib'd by the Fruit, does greatly retard them: Beſides, no Fruit will ripen ſo well when entirely expos'd to the Sun, as when they are gently ſcreen'd with Leaves; and by the pulling off theſe Leaves, which are abſolutely neceſſary to prepare the Juices before they enter the Fruit, the groſs Parts of which are perſpir'd away by the Leaves, the Fruit muſt either be depriv'd of Nouriſhment, or elſe ſome of the groſs Particles will enter with the more refin'd Parts of the Juice, and thereby render the Fruit worſe than it would otherwiſe be, were the Leaves permitted to remain upon the Branches: For if the weak dangling Shoots are conſtantly diſplac'd as they are produc'd, the Fruit will not be too much ſhaded by the Leaves which are upon the bearing Branches.

When the Fruit is ripe, if the Stalks of the Bunches are cut half through a Fortnight before they are gather'd, it will cauſe the Juice to be much better, becauſe there will not be near ſo great a Quantity of Nouriſhment enter the Fruit, whereby the watry Particles will have Time to evaporate, and the Juice will be better digeſted. This is practis'd by ſome of the moſt curious *Vignerons* in the South of *France*, where they make excellent Wine. But if after the Fruit be cut, it is hung up in a dry Room upon Strings, ſo as not to touch each other for a Month before they are preſs'd, it will alſo greatly add to the Strength of the Wine, becauſe in that Time a great Quantity of the watery Parts of the Juice will evaporate. This is a conſtant Practice with ſome Perſons, who inhabit in the *Tyroleze* on the Borders of *Italy*, where is made a moſt delicious rich Wine, as hath been atteſted by Dr. *Burnet* in his Travels, and I have heard the ſame from ſeveral Gentlemen who have travelled that Road ſince.

But with all the Care that can poſſibly be taken, either in the Culture of the *Vines*, or in making the Wine, it will not be near ſo good while the Vineyard is young, as it will be after it has been planted ten or twelve Years; and it will be conſtantly mending until it is fifty Years old, as is atteſted by ſeveral curious Perſons abroad, as alſo by the moſt skilful Wine-Coopers at home, who can tell the produce of a young Vineyard from that of an old one, after it is brought to *England*, by the Colour of the Wine. This Difference is very eaſily accounted for, from the different Structure of the Veſſels of the Plants, thoſe of young *Vines* being larger and of a looſer Texture, do eaſily admit of a larger Quantity of groſs Nouriſhment to paſs through them; whereas thoſe of old *Vines*, which are more woody, are more cloſely conſtricted, and thereby the Juice is better ſtrain'd in paſſing through them, which muſt conſequently render it much better, tho' the Grapes from a young Vineyard will be larger, and afford a greater Quantity of Juice: So that People ſhould not be diſcourag'd, if their Wines at firſt are not ſo good as they would wiſh; ſince afterward, when the Vineyard is a few Years older. the Wine may anſwer their Expectation. As to the Fermenting and Managing the Wine, that is treated of particularly under the Article of *Wines*. to which the Reader is deſir'd to turn.

The Vineyard being now arriv'd to a bearing State, ſhould be treated after the following Manner: Firſt, In the Pruning, there ſhould never be too many Branches left upon a Root, nor thoſe too long; for although by doing of this, there may be a greater Quantity of Fruit produc'd, yet the Juice of theſe will never be ſo good as when there is a moderate Quantity of Fruit, which will be better nouriſh'd, and the Roots of the Plants not ſo much weaken'd, which is found to be of ſo bad Conſequence to Vineyards, that when Gentlemen abroad let out Vineyards to *Vignerons*, there is always a Clauſe inſerted in their Leaſes to direct how many Shoots ſhall be left upon each *Vine*, and the Number of Eyes to which the Branches muſt be ſhorten'd; becauſe were not the *Vignerons* thus ty'd down, they would overbear the *Vines*, ſo that in a few Years they would exhauſt their Roots, and render them ſo weak, as not to be recover'd again in ſeveral Years, and their Wine would be ſo bad, as to bring a Diſreputation on the Vineyard, to the great Loſs of the Proprietor.

The Number of Branches which the *Italians* do generally agree to leave upon a ſtrong *Vine*, are four; two of the ſtrongeſt have four Eyes, and the two weaker are ſhorten'd down to two Eyes each; which is very different from the common Practice in *England*, where it is uſual to ſee ſix or eight Branches left upon each Root, and thoſe, perhaps, left with ſix or eight Eyes to each; ſo that if theſe are fruitful, one Root muſt produce near four times the Number of Bunches which the *Italians* do ever permit, and ſo conſequently the Fruit will not be ſo well nouriſh'd, and the Roots will alſo be greatly weaken'd, as is the Caſe of all Sorts of Fruit-trees, when a greater Number of Fruit is left on than the Trees can nouriſh.

The next Thing is, conſtantly to keep the Ground perfectly clean between the *Vines*, never permitting any Sort of Plants or Weeds to grow there: The Ground ſhould alſo be carefully dug every Spring, and every third Year ſhould have ſome Manure, which ſhould be of different Sorts, according to the Nature of the Ground, or which can be moſt conveniently procur'd.

If the Land is ſtiff, and inclinable to bind on the Surface, then *Sea-Sand* or *Sea-Coal* Aſhes are either of them very good Manure for it; but if the Ground be looſe and dry, then *Lime* is the beſt Manure for it. This muſt be ſpread thin upon the Surface of the Ground before it is dug, and in digging ſhould be bury'd equally in every Part of the Vineyard. Theſe are much preferable to any Sort of Dung for *Vines*, ſo that it will be worth the Expence to procure either of them: And as they do require manuring but every third Year, ſo where the Vineyard is large, it may be divided into three equal Parts; each of which may be manur'd in its Turn, whereby the Expence will be but little every Year; whereas when the Whole is manur'd together it will add to the Expence, and in many Places there can't be a ſufficient Quantity procured to manure a large Vineyard in one Year.

This Digging and Manuring ſhould always be perform'd about the Beginning of *March*, at which time all the ſuperficial or *Day-Roots*, as they are call'd, muſt be cut off, but the larger Roots muſt not be injur'd by the Spade, *&c.* therefore the Ground cloſe to the Stem of the *Vines* muſt not be dug too deep. After this is done, the Stakes ſhould be placed down, one on each Side the *Vines*, at about ſixteen Inches from their Stems, to which the longeſt Bearing-branches ſhould be faſten'd, and one Stake cloſe to the Stem, to which the two ſhorter Branches ſhould be trained upright, to furniſh Wood for the ſucceeding Year.

In the Summer they muſt be carefully look'd over, as before, rubbing off all weak, dangling Shoots, and training the good ones to the Stakes regularly, as they are produced, and thoſe of them which have Fruit, ſhould be ſtopp'd in *May*, about three Joints beyond the Bunches; but the upright Shoots, which are deſign'd for Bearing the following Year, muſt not be ſtopp'd 'till the Beginning of *July*, when they may be left about five Feet long; for if they are ſtopp'd ſooner in the Year, it will cauſe 'em to ſhoot out many dangling Branches from the Sides of the Eyes, which will not only occaſion more Trouble to diſplace 'em, but alſo will be injurious to the Eyes or Buds.

N. B. All this Summer-Dreſſing ſhould be perform'd with the Thumb and Finger, and not with Knives, becauſe the Wounds made by Inſtruments in Summer, do not heal ſo ſoon as when ſtopp'd by gently nipping the leading Bud, which if done before the Shoot is become woody, it may be effected with great Eaſe, being very tender while young.

When a Vineyard is thus carefully dreſs'd, it will afford as much Pleaſure in viewing it as any Plantation of Trees or Shrubs whatever, the Rows being regular, and if the Stakes are exactly placed, and the upright Shoots ſtopp'd to an equal Height, there is nothing in Nature which will make a more beautiful Appearance; and during the Seaſon that the *Vines* are in Flower, they do emit a moſt grateful Scent, eſpecially in a Morning and Evening, and when the Grapes begin to ripen, there will be a freſh Pleaſure ariſing in viewing of them.

But as the Beauty of Vineyards ariſes from the regular Diſpoſition of the Branches of the *Vines*, ſo great Care ſhould be taken in their Management, to train 'em regularly, and to provide every Year for new Wood to bear the ſucceeding Year, becauſe the Wood which has produced Fruit, is commonly cut quite away, after the Fruit is gathered; or at leaſt is ſhorten'd down to two Eyes, to force out Shoots for the next Year, where there is not a ſufficient Number of Branches upon the *Vine*, of thoſe trained upright; ſo that in Summer, when the *Vines* are in Perfection, there ſhould be ſix upright Shoots trained for the next Year's Wood, and three or four Bearing-branches, with Fruit on them; more than theſe ought never to be left upon one *Vine*, for the Reaſons before given.

N. B. The *Auvernat*, or *True Burgundy Grape*, is valued in *France* before any other Sort, becauſe the Fruit does never grow very cloſe upon the Bunches, ſo that they are more equally ripen'd, for which Reaſon it ſhould alſo be preferr'd in *England*; though, in general, thoſe Sorts are moſt eſteem'd with us that have always cloſe Bunches, which is certainly wrong; for it may be obſerved, that the Grapes upon ſuch Bunches are commonly ripe on one Side, and green on the other, which is a bad Quality for ſuch as are preſs'd to make Wine.

I ſhall now ſubjoin a few Sorts of *Vines* which are preſerv'd in ſome curious Gardens, more for the Sake of Variety than the Value of their Fruit: Theſe are,

1. Vitis; *ſylveſtris, Virginiana. Park. Theat.* The wild Virginian Grape.

2. Vitis; *vulpina, dicta Virginiana alba. Pluk. Alm.* The Fox Grape, *vulgo.*

3. Vitis; *alba dulcis, foliis variegatis.* The blotch'd-leav'd Vine.

4. Vitis; *alba dulcis, limbis foliorum argentatis.* The ſtrip'd leav'd Vine.

5. Vitis; *quinquefolia, Canadenſis ſcandens. Tourn.* The Virginian Vine *or* Common Creeper.

The firſt and ſecond Sorts do grow in great Plenty in the Woods of *America*, where, I have been inform'd, are many other Sorts, ſome of which do produce Fruit very little inferior to moſt of our fine Sorts which are cultivated in *Europe*; notwithſtanding which, it is generally thought impoſſible to make Wine in *America*; but this, I dare ſay, muſt proceed from a Want of Skill, rather than any bad Quality in the Soil or Climate: So that inſtead of planting Vineyards on their looſe, rich Lands (as hath generally been practis'd by the Inhabitants of thoſe Countries) if they would plant them upon riſing Ground, where the Bottom was rocky or hard near the Surface, I dare ſay they would have very good Succeſs; for the great Fault complain'd of in thoſe Countries, is, that the Grapes do generally burſt before they are fully ripe, which muſt certainly be occaſion'd by their having too much Nouriſhment; therefore, when they are planted on a poorer *Soil*, this will be, in part, remedied. Another Cauſe of this may proceed from the Moiſture of the Air (occaſion'd by the Perſpiration of Trees, *&c.*) which being imbib'd by the Fruit, may break their Skins. This indeed, can't be prevented until the Country is better clear'd of the Timber; but however, this ſhould caution People not to plant *Vines* in ſuch Places where there are great Quantities of Woods, becauſe of this Effect which it hath on the Grapes. But to return.

Theſe two Sorts of *Vines* are preſerved in the Gardens of thoſe who are curious in Botany, but I have not ſeen either of 'em produce Fruit in this Country. Theſe may be propagated by Layers, which will take Root in one Year, and may be taken off and tranſplanted in the Spring where they are to remain, which ſhould be againſt a warm Wall, becauſe if they are expos'd to much Cold in Winter, they are often deſtroy'd, eſpecially while they are young.

Their Pruning and Management is the ſame with any other Sorts of Grapes, but only they ſhould have fewer Shoots, and thoſe ſhorten'd down very low, otherwiſe they will make very weak Shoots, and never arrive to any conſiderable

Strength, ſo will not be capable of producing Fruit.

The two Sorts with ſtrip'd Leaves are alſo preſerv'd by thoſe who are curious in collecting a Variety of Plants. Theſe may be propagated as the other Kinds of Grapes, but are tender, and ſo muſt have a warm Situation, otherwiſe they will not thrive; nor do the Cuttings of theſe take Root ſo readily as thoſe whoſe Leaves are plain: But as there is no very great Beauty in theſe Plants, ſo they are ſcarcely worth cultivating, unleſs for Variety.

The fifth Sort was originally brought from *America*, but from its Hardineſs, and being eaſy to propagate, is become as common as if it were a Native of this Country.

This Plant is chiefly planted in ſmall Gardens near *London*, where it endures the Smoak better than moſt other Plants; and being a rampant Grower, is planted againſt high Walls and Buildings, which it will cover ſooner than any other Sort of Plant, and in Summer will look green, which is what the Inhabitants of *London* are greatly pleas'd with. The Branches of this Plant will ſometimes ſhoot twenty or thirty Feet long in one Summer, and do ſend forth Roots from their Joints whereby they faſten themſelves to the Building where they are placed, ſo that they do not require much Trouble to ſupport them.

The only Culture they require, is to cut out all the ſmall weak Shoots in *March*, and ſhorten the ſtrong ones to about ten Feet long, which will ſtrengthen them againſt the ſucceeding Summer, and cauſe them to ſhoot vigorouſly.

This Plant may be propagated by Cuttings, which ſhould be planted in the Spring upon a ſhady Border, where they will take Root freely, and if water'd in dry Weather, will make a great Progreſs the ſucceeding Summer, and the Spring after may be tranſplanted where they are to remain, which may be in almoſt any Soil or Situation, for they are very hardy Plants.

VITIS IDÆA: The Bilberry *or* Whortle-berry-buſh.

The *Characters* are;

The Flower conſiſts of one Leaf, which is ſhap'd like a Pitcher; from whoſe Empalement ariſes the Pointal, fix'd like a Nail, in the upper Part of the Flower, which afterwards becomes a ſoft umbilicated Fruit, or Berry, full of Juice, in which are encloſ'd Seeds, for the moſt part ſmall.

The *Species* are;

1. VITIS IDÆA; *magna quibuſdam, ſive Myrtillis grandis. J. B.* The great Bilberry-buſh.
2. VITIS IDÆA; *foliis oblongis crenatis, fructu nigricante. C. B. P.* Black Wharts, Whortle-berries, *or* Bilberry.
3. VITIS IDÆA; *ſempervirens, fructu rubro. J. B.* Red Whorts *or* Whortle-berries.
4. VITIS IDÆA; *Æthiopica, Buxi minoris folio, floribus albicantibus. H. A.* Æthiopian Whortle-berry with a Leſſer Box-leaf and white Flowers
5. VITIS IDÆA; *Americana, foliis ſubrotundis, hirſutis, ex adverſo naſcentibus, floribus minimis herbaceis, fructu parvo rubro.* American Whortle-berry, with roundiſh hairy Leaves growing by Pairs, ſmall greeniſh Flowers, and a ſmall red Fruit, *vulgarly call'd*, St. Peter's-wort.

The firſt and third Sorts do grow wild in *Yorkſhire*, *Derbyſhire*, *Weſtmoreland*, and other Northern Countries of *England*, as alſo upon the *Alps*, and other lofty Mountains in ſeveral Parts of *Europe*; but can't by Art be cultivated in Gardens near *London*, ſo as to thrive and produce Fruit. The firſt commonly grows to the Height of three or four Feet, in its native Places of Growth, and produces great Quantities of Fruit, which the poor Inhabitants of thoſe Countries gather, and ſell in the Markets for Tarts, *&c.* The third Sort is a very humble Plant, ſeldom growing much taller than the Dwarf *Dutch Box* (which is us'd for edging of Borders:) This produces in its native Places of Growth, large Quantities of red Fruit; but theſe will rarely grow in Gardens, unleſs planted in a ſtrong, cold Soil, and a ſhady Situation.

The ſecond Sort is very common upon marſhy or boggy Heaths, in divers Parts of *England*, and will grow to the Height of three or four Feet in ſuch Places, and produce great Quantities of Fruit, which ripen in *July*, and are gathered by the poor People for the ſame Uſes as the firſt Sort.

This is alſo very difficult to cultivate in Gardens: The only Method is, to take up ſome Plants in the Spring, from the Places of its Growth, with Balls of Earth to their Roots, and tranſplant them into a moiſt, ſhady Part of the Garden, where, if the Soil be not too rich or warm, they will thrive tolerably well, provided the Ground is not dug or cleaned, for theſe Plants will grow beſt on ſuch Places as are never cultivated. This Sort is directed by the *College of Phyſicians* to be uſed in Medicine.

The fourth Sort is a tender Plant which is preſerv'd in the Gardens of thoſe who delight in preſerving Exotick Plants. This is propagated by Layers, which ſhould be lay'd down in the Spring, obſerving to make a little Slit in the Part which is laid in the Ground (in the manner as is practis'd in Laying of Carnations) and in dry Weather they muſt be frequently water'd, which will greatly facilitate their taking Root; and in the following Spring they may be cut off from the old Plants, and planted each into a ſeparate Pot, filled with ſtrong, freſh Earth, and placed upon a moderate Hot-bed which will facilitate their taking freſh Root; but they muſt be ſhaded from the Sun with Mats, and frequently water'd.

In the Summer theſe Plants may be expoſed in the open Air, with other hardy Exotick Plants; and in Winter they muſt be placed in the Green-houſe, where they ſhould have as much free Air as poſſible in mild Weather, and muſt be frequently water'd, otherwiſe they will not thrive.

Theſe Plants produce their Flowers in Winter and Spring, but do rarely produce Fruit in this Country.

The fifth Sort grows to a Shrub of ſix or ſeven Feet high, and though a Native of *America*, yet will endure the ſevereſt Cold of our Climate in the open Air. It may eaſily be propagated by Layers or Suckers, which are generally produced in great Plenty from the Roots of the old Plants; theſe ſhould be taken off either in Spring or Autumn, and planted out amongſt other Shrubs of the ſame Growth, where they will add to the Diverſity, but there is little

Beauty in them; for their Flowers (which are produced in *September*) are very ſmall, and of a greeniſh Colour, ſo that unleſs a Perſon ſearch for them, they may eſcape the Sight, being always ſituate amongſt the Leaves.

Theſe Flowers are ſucceeded by ſmall red Fruit, which ripen in Winter, after the Leaves are fallen off, ſo are more viſible than the Flowers. This Fruit is not uſed in its native Country, it having very little Taſte, and being ſo very ſmall, can't be worth the Trouble of gathering. I ſuppoſe this Shrub had the Name of *St. Peter's-wort* impos'd on it before it produced either Flowers or Fruit in *England*, from the Reſemblance which the Leaves of it have to thoſe of *Aſcyron*, or *St. Peter's-wort*; for in other reſpects it differs widely from the Characters of that *Genus*.

VITIS SYLVESTRIS; *vide* Clematitis.

ULMUS: The Elm-Tree.

The *Characters* are;

The Flower conſiſts of one Leaf, which is ſhap'd like a Bell, having many Stamina *(or Threads) in the Center; from the Bottom ariſes the Pointal, which afterwards becomes a membranaceous or leafy Fruit, almoſt Heart-ſhap'd, in the Middle of which is placed a Pear-ſhap'd Seed-Veſſel, containing one Seed, for the moſt part of the ſame Shape.*

The *Species* are;

1. ULMUS; *vulgatiſſima, folio lato ſcabro. Ger. Emac.* The common rough-leav'd Elm.

2. ULMUS; *folio latiſſimo ſcabro. Ger. Emac.* The Witch-Hazel, *or* broad-leav'd Elm, by ſome unskilful Perſons called the Britiſh Elm.

3. ULMUS; *minor, folio anguſto ſcabro. Ger. Emac.* The ſmall-leav'd *or* Engliſh Elm.

4. ULMUS; *folio, glabro. Ger. Emac.* The ſmooth-leav'd, *or* Witch-Elm.

5. ULMUS; *major Hollandica, anguſtus & magis acuminatis ſamarris, folio latiſſimo ſcabro. Pluk. Alm.* The Dutch Elm.

6. ULMUS; *minor, folio anguſto ſcabro, elegantiſſime variegato.* The Engliſh Elm with beautiful ſtrip'd Leaves.

7. ULMUS; *folio glabro eleganter variegato.* The Witch-Elm with ſtrip'd Leaves.

8. ULMUS; *minor foliis flaveſcentibus.* The yellow-leav'd Elm.

9. ULMUS; *major Hollandica, anguſtis & magis acuminatis ſamarris, folio latiſſimo ſcabro, eleganter variegato.* The Dutch Elm with ſtrip'd Leaves.

The four firſt-mention'd Sorts are very common in divers Parts of *England*, though it is generally believ'd neither of 'em were originally Natives of this Country; but however that be, they have propagated themſelves by Seeds and Suckers which have aroſe from the Roots of old Trees, in ſuch Plenty, as hardly to be rooted out, where they have long had Poſſeſſion, eſpecially in Hedge Rows, where there is Harbour for their Roots, which, when left undiſturb'd, will ſend forth a freſh Parcel of young Plants annually, from whence the People who ſupply the Nurſery-men do gather them.

The fifth Sort is equally hardy, and almoſt as common in *England* as either of the former; this is pretty quick of Growth while young, and will outſtrip the common *Engliſh Elm* for ſeveral Years; but after twenty or thirty Years Growth, the *Engliſh Elm* will get the better every Year, and the Timber thereof being much preſerable to that of the *Dutch Elm*, renders it more valuable for Planting.

The Sorts with ſtrip'd Leaves are preſerv'd by thoſe who are curious in collecting variegated Plants, but they are not worth propagating unleſs for the Sake of Variety; being of ſlower Growth, and in moſt People's Judgment, leſs beautiful than the plain Sorts.

Theſe Plants may be either propagated by Layers or Suckers taken from the Roots of the old Trees, the latter of which is greatly practis'd in many Places; but as theſe are often cut up with very indifferent Roots, ſo they very often miſcarry, and render the Succeſs doubtful; whereas thoſe which are propagated by Layers are in no Hazard, and do always make better Roots, and come on faſter than the other, for which Reaſons this Method ſhould be more univerſally practis'd. And ſince a ſmall Compaſs of Ground fill'd with Stools of theſe Plants, will be ſufficient to furniſh a Nurſery of a conſiderable Extent, with Layers to be tranſplanted, ſo it is richly worth every Perſon's while, who would cultivate theſe Trees, to allot a Piece of Ground for this Purpoſe.

The beſt Soil for ſuch a Nurſery is a freſh Hazel Loam, neither too light and dry, nor over moiſt and heavy; this Ground ſhould be well trench'd, and a little rotten Dung bury'd therein; and in doing of this, great Care ſhould be taken to pick out all Roots of pernicious Weeds, which if left in the Ground would be very injurious to the Layers, and can't afterwards be ſo eaſily rooted out; then having laid the Ground level, the Plants muſt be planted at about eight Feet aſunder each Way: The beſt Seaſon for this Work is in Autumn, as ſoon as the Leaves begin to decay, that they may take Root before the dry Weather in the Spring comes on, whereby a great Expence of watering them will be ſav'd; for if they are well ſettled in the Ground before the dry Weather, they will require little more than to mulch their Roots, to keep the Earth from drying.

Theſe Plants ſhould be permitted to grow rude two Years, during which Time the Ground between ſhould be carefully cleaned and dug every Spring; by this Time they will be ſtrongly rooted, and have made pretty ſtrong Shoots, ſo that they may be lay'd in the Ground: The manner of performing this being already deſcribed in the Article of *Layers*, I ſhall forbear repeating it in this Place.

When theſe *Layers* are well rooted, they ſhould be taken off and tranſplanted out into a Nurſery, which ſhould be upon a good Soil and well prepared (as before for the Stools). The Plants ſhould be planted in Rows four Feet aſunder, and two Feet Diſtance Plant from Plant in the Rows. This ſhould be done in Autumn, as ſoon as the Leaves begin to decay; and if there is ſome Mulch laid upon the Surface of the Ground about their Roots, it will preſerve 'em from being hurt by Froſt in Winter, and from drying Winds in Spring, and thereby ſecure them from all Hazard.

The following Summer the Ground between 'em ſhould be conſtantly kept clean from Weeds, and in Autumn they ſhould be pruned up, cutting off all ſtrong lateral Shoots, which, if left on, would impede their upright Growth; but there muſt be ſome of the ſmaller

Shoots left on to detain the Sap, in order to augment the Stems of the Trees; for where they are pruned up too naked, they are apt to grow up too ſlender to ſupport themſelves, ſo that their Heads will recline to the Ground, and cauſe their Stems to grow crooked.

In this Nurſery they may remain five or ſix Years, obſerving conſtantly to dig the Ground between 'em every Spring, and to trim them as before directed, which will promote their Growth, and render them ſtrong enough to tranſplant out where they are to remain, in the Time before-mention'd.

Theſe Trees are very proper to plant in Hedge-Rows, upon the Borders of Fields, where they will thrive much better than when planted in a Wood or cloſe Plantation, and their Shade will not be very injurious to whatever grows under them; but when theſe Trees are tranſplanted out upon Banks after this manner, the Banks ſhould be well wrought and clear'd from all other Roots, otherwiſe the Plants, being taken from a better Soil, will not make much Progreſs in theſe Places. About *Michaelmas* will be a good Time for this Work, for the Reaſons before aſſigned, but when they are planted, there ſhould be ſome Stakes fix'd in by them, to which they ſhould be faſten'd, to prevent their being diſplaced by the Wind; and part of their Heads ſhould be taken off, before they are planted, which will alſo be of Uſe in preventing their being eaſily overturn'd by Winds, but by no means ſhould their leading Shoot be ſtopp'd, nor their Branches too cloſely cut off; for if there are not ſome Shoots left on to draw and attract the Sap, they will be in Danger of miſcarrying.

Theſe Trees are alſo proper to plant at a Diſtance from a Garden or Building, to break the Violence of Winds, for which Purpoſe there is not any Tree more uſeful; for they may be trained up in Form of a Hedge, keeping 'em cut every Year, which will cauſe 'em to grow very cloſe and handſome, to the Height of forty or fifty Feet, and be a great Protection againſt the Fury of Winds; but they ſhould not be planted too near a Garden, where Fruit-trees or other Plants are placed, becauſe the Roots of the *Elms* do run ſuperficially near the Top of the Ground to a great Width, and will intermix with the Roots of the other Trees, and deprive 'em of Nouriſhment; nor ſhould they be planted near Gravel or Graſs-Walks, which are deſign'd to be well kept, becauſe the Roots will run into them, and ſend forth Suckers in great Plenty, which will deface the Walks, and render them unſightly.

But for large Gardens, where Shade is required, there is ſcarce any Tree ſo proper for that Purpoſe, being eaſy to remove when grown to a conſiderable Size, ſo that a Perſon who is willing to have his Plantations for Shade in a ſhort Time, may procure Trees of two Feet Circumference in their Trunk, which will be in no Danger of ſucceeding, provided they are removed with Care; and theſe will take Root and grow again, almoſt as well as young Plants, which is what few other Sorts of Trees will do; but then they ſhould be ſuch Trees as have been thus regularly train'd up in a Nurſery, and have good Roots, and not ſuch as are taken out of Hedge-Rows, (as is by ſome practis'd) which ſeldom riſe with any tolerable

Roots, and conſequently do often miſcarry.

In Planting of theſe Trees, great Care ſhould be taken not to bury their Roots too deep, which is very injurious to them, eſpecially if they are planted on a moiſt *Loam* or *Clay*, in which Caſe, if the *Clay* is near the Surface, it will be the beſt Way to raiſe the Ground in a Hill, where each Tree is to be placed, which will advance their Roots above the Surface of the Ground, ſo that they will not be in Danger of rotting in Winter with Moiſture.

When theſe Trees are propagated by Suckers taken from the Foot of old Trees, they are commonly lay'd into the Ground very cloſe in Beds, where, in dry Weather, they may be frequently water'd, to encourage their putting out Roots: In theſe Beds they are left two Years, by which time thoſe that live will be well rooted (though a great many of them generally die); then they ſhould be tranſplanted into the Nurſery, and manag'd as hath been directed for the *Layers*.

There are ſome who raiſe the *Witch-Elm* from Seeds, which it generally produces in great Plenty, and are ripe in *April*. Theſe ſhould be ſown upon a Bed of freſh, loamy Earth, and gently cover'd; in dry Weather they ſhould be water'd, and if the Bed is ſhaded from the violent Heat of the Sun, it will be of great Service to the Seeds (for I always obſerve, the Plants to come up better in the Shade than when expoſed to the Sun); when the Plants come up, they ſhould be carefully clear'd from Weeds, and after they have ſtood two Years in the Seed-bed, they will be fit to plant out into the Nurſery, where they muſt be manag'd as the former.

Sometimes the common *Engliſh Elm* will produce Seeds, but it is not ſo conſtantly fruitful as the *Witch-Elm*, which ſeldom fails to produce great Quantities, when they have arriv'd to a due Maturity, which Seeds will fall to the Ground; and when they light upon a Spot which is not diſturb'd, the Plants will come up in great Plenty.

The Timber of the common *Engliſh Elm* is generally preferr'd to the reſt, though that of the *Witch-Elm* is often as good, and is the largeſt Tree, when planted on a kindly Soil: But the *Dutch Elm* affords the worſt Timber, and never will grow to the Stature of either of the other Sorts, ſo that this ſhould not be cultivated for the Timber; therefore the beſt Way to be ſure of the Kinds which a Perſon would chuſe to propagate, is to have a Nurſery of Stools, in order to furniſh Layers; for when they are grubbed up from Hedge-Rows, there will often be many Sorts intermix'd, eſpecially if the People who go about to gather 'em do furniſh them, becauſe they take 'em indifferently where-ever they can procure them; ſo that when they are planted out thus blended together, there will be a conſiderable Difference in the Growths, which will deface the Plantation.

URTICA; The Nettle.

The *Characters* are;

It hath an apetalous Flower, conſiſting of many Stamina *included in an Empalement, but theſe are barren; for the Embryo's are produced either on different Plants, or on different Parts of the ſame Plant, without any viſible Flower, which afterwards become a bivalve Seed-veſſel, ſometimes gathered into round Heads, and at other times are ſmall and hairy, incloſing ſeveral Seeds.*

The *Species* are;

1. Urtica; *urens, maxima.* C. B. P. The greateſt Stinging-nettle.

2. Urtica; *urens, minor.* C. B. P. The leſſer Stinging-nettle.

3. Urtica; *urens, pilulas ferens,* 1. *Dioſcoridis, ſemine lini.* C. B. P. Pill-bearing Stinging-nettle, with a Seed like Flax.

4. Urtica; *altera, pilulifera, Parietariæ foliis.* H. R. Par. Another Pill-bearing Stinging-nettle with Leaves like Pellitory, *commonly called* Spaniſh Marjoram.

5. Urtica; *pilulifera, folio anguſtiori, caule viridi, Balearica. Salvad.* Narrower-leav'd Pill-bearing Stinging-nettle from *Majorca*, with a green Stalk.

The firſt of theſe Sorts is a very common Weed upon the Sides of Banks, Ditches, and other uncultivated Places, where its Roots will ſpread and over-run the Ground, ſo that it ſhould always be carefully extirpated from Gardens. It is ſometimes uſed in Medicine, but may be eaſily procured from the Fields at almoſt any Seaſon.

The ſecond Sort is alſo a very common Weed in Gardens, and cultivated Fields, but it being an annual Plant, is not ſo difficult to eradicate as the former.

The third, fourth, and fifth Sorts are preſerved in many Gardens for Variety, but the fourth, which is commonly call'd *Spaniſh Marjoram*, is the moſt common in *Engliſh* Gardens, where it is cultivated for making Sport, many ignorant Perſons taking it for a Sort of *Marjoram*, are often ſeverely ſtung by ſmelling to it; and others put it into the Middle of Noſegays, amongſt other Greens, which they preſent to Perſons who are not acquainted with the Plant, and ſo by ſmelling to it, they ſuffer in like manner as the former.

The third Sort is mention'd to grow wild in *England*, but the other two are brought from warmer Countries.

All theſe Plants may be eaſily propagated by ſowing their Seeds in *March*, upon a Bed of light rich Earth, and when the Plants are come up, they ſhould be tranſplanted out into Beds, or the Borders of the Pleaſure-Garden, interſperſing 'em amongſt other Plants, ſo that they may not be ſo eaſily diſcover'd by Perſons whom there is a Deſign to deceive, by gathering a Sprig from them to ſmell to; after the Plants have taken Root, they will require no farther Care, but only to keep 'em clear from Weeds; in *June* they will flower, and their Seeds will ripen in Autumn, which, if permitted to ſhed upon the Ground, will come up the following Spring, and flouriſh without any farther Care.

The Seeds of the third Sort are ſometimes uſed in Medicine.

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W A

WALKS: In order to the laying *Walks* in Gardens, it will be very proper that the Bottom of them be fill'd with ſome Lime-rubbiſh or coarſe Gravel, Flint-ſtones, or other rocky Stuff, which will be very ſerviceable in preventing Weeds from growing through the Superficies of Gravel; this Bottom ſhould be laid eight or ten Inches thick, over which the Coat of Gravel ſhould be ſix or eight, which Gravel ſhould be fine, but yet not skreen'd, becauſe that ſpoils it. This ſhould be laid on a Heap, rounding, ſo that the larger rough Stones may run down on the Sides, which being every now and then rak'd off, the Gravel by that means will be ſufficiently fine.

After the Gravel has been laid to the Thickneſs above-mention'd, then the *Walks* muſt be rak'd true and level, from all great Drips as well as little Holes; by this means moſt of the Stones of the *Walks* will be rak'd under your Feet, which ſhould rather be gently ſprinkled back again, over the laſt Length that is rak'd, than bury'd (as is the Practice of many Gardeners), for by this means the *Walk* will lie much harder, and the coarſeſt Stones will very much contribute to its Firmneſs.

There is alſo a great Fault committed frequently, in laying *Walks* too round, and ſome to that Degree, that they cannot be walk'd on with that Eaſe and Pleaſure that ought to be; and beſides, this too great Rounding takes off much from the ſeeming Breadth of the *Walk*.

The common Allowance for a *Gravel-walk* of five Feet Breadth, is an Inch in the Crown; ſo that if a *Walk* be twenty Feet wide, according to this Proportion, it will be four Inches higher in the Middle than on each Side; and a *Walk* of twenty-five Feet, will be five Inches; one of thirty Feet, ſix Inches; and ſo on.

When a *Walk* has been thus carefully laid, or rather after every Length or Part of it, (which commonly is about fifteen Feet each), then it ſhould be rolled well, both in length and alſo croſs-ways: The Perſon who rolls it ſhould wear Shoes with flat Heels, that he may not make Holes in the *Walks*; for when they are once made in a new *Walk*, it will not be eaſy to roll them out again.

In order to lay *Gravel-walks* firm, it will be neceſſary to give them three or four Water-rollings; that is, they muſt be rolled when it rains ſo very faſt, that the *Walks* ſwim with Water; this will cauſe the Gravel to bind; ſo that when the *Walks* come to be dry, they will be as hard as a Terraſs.

Iron-mould Gravel is accounted the beſt for Binding; or Gravel with a little binding Loam amongſt it; which latter, tho' it be apt to ſtick to the Heels of Shoes, in hot wet Weather, yet nothing binds better in dry Weather.

When the Gravel is over ſandy or ſharp, Loam is frequently mix'd with it, which, if they be caſt together in Heaps, and well mixed, will bind like a Rock; whereas looſe Gravel is as uncomfortable and uneaſy to walk on, as any other Fault in a *Walk* can render it.

The beſt Gravel for *Walks* is ſuch as abounds with ſmooth Pebbles (as is that dug at *Black-heath*), which being mix'd with a due Proportion of Loam, will bind like a Rock, and is never injur'd by wet or dry Weather; and the Pebbles being ſmooth, are not ſo liable to be turn'd up, and looſen'd by the Feet in walking, as are thoſe which are angular and rough; for where *Walks* are laid with ſuch Gravel as is full of irregular Stones, they appear unſightly in a Day's time after Rolling, becauſe the Stones will riſe upon the Surface whenever they are walk'd upon, but the ſmooth Pebbles will remain handſome two or three Days without Rolling.

The Width of theſe *Walks* muſt always be proportion'd to their Length, and the Size of the Garden; but ſmall *Walks* are every where diſagreeable; ſo that if the *Walks* were to be only two hundred Feet long, I ſhould adviſe 'em to be made fourteen or fifteen Feet wide; for it is much better to have but few *Walks* in a Garden, and thoſe to be ſpacious, than to make many ſmall *Walks*, as is often practiſed.

Graſs-walks in a Garden are both ornamental and delightful, in Summer time and dry Weather.

Theſe may be made either by laying them with Turf, or ſowing them with Hay-ſeed, and raking them fine and level, which, with keeping them well rolled, and frequently mow'd, will make the Graſs fine.

Theſe may be laid a little rounding, to caſt off the Water the better, but the Slope muſt not be ſo great as to be diſcover'd with the Eye: About a fourth Part of the roundneſs allow'd for *Gravel-walks*, will be ſufficient for theſe, if in wet Ground, but if the Ground be dry, it is the beſt Way to lay 'em quite level.

Sometimes there are Water-tables on each Side of theſe *Walks*, which are very good for draining them, and alſo for keeping the Graſs and Weeds from mixing with the Borders; and beſides, theſe Water-tables render the *Walks* the handſomer, and appear the more beautiful.

Theſe Water-tables ought to be new cut once or twice a Year, and this ought to be done by a ſtrait Line, as exactly as poſſible.

The oftener theſe *Walks* are mowed and rolled in Summer, the thicker their Bottoms will be; and in Autumn the Graſs ſhould be kept very ſhort, and well rolled, for if it be permitted to grow pretty long at this Seaſon, the Blade will decay in Winter, and greatly injure their Roots. The Worm-caſts muſt alſo be beat to Pieces with a long Aſh-Pole, and ſo ſpread over the Graſs; this the Gardeners call *Polling of a Walk*, which is done by bruſhing the Surface of the Ground ſtrongly with a ſlender Pole; the oftener this is repeated the better it is for the Graſs, beſides, it will deſtroy the Worm-caſts, and render the *Walks* more beautiful.

WALL-FLOWER; *vide* Leucojum.

WALNUT; *vide* Nux juglans.

WATER, is one of the moſt conſiderable Requiſites belonging to a Garden; if a Garden be without it, it brings a certain Mortality upon whatſoever is planted. By Waterings the great Droughts in Summer are allay'd, which would infallibly burn up moſt Plants, had we not the Help of *Water* to qualify the exceſſive Heats: beſides, as to noble Seats, the Beauty that *Water* will add, in making *Jet d'Eaux*, Canals, and Caſcades, which are ſome of the nobleſt Ornaments of a Garden.

WILDERNESSES, if rightly ſituated, artfully contrived, and judiciouſly planted, are the greateſt Ornaments to a fine Garden: But it is rare to ſee theſe ſo well executed in Gardens, as to afford the Owner due Pleaſure, (eſpecially if he is a Perſon of an elegant Taſte) for either they are ſo ſituated as to hinder a diſtant Proſpect, or elſe are not judiciouſly planted: The latter of which is ſcarce ever to be found in any of our moſt magnificent Gardens, very few of their

Deſigners ever ſtudying the natural Growth of Plants, ſo as to place them in ſuch manner, that they may not obſtruct the Sight from the ſeveral Parts of the Plantation which are preſented to the View: Therefore I ſhall briefly ſet down what has occurred to me from time to time, when I have conſidered theſe Parts of Gardens, whereby a Perſon will be capable to form an Idea of the true Beauties, which ought always to be ſtudied in the Contrivance of *Wilderneſſes*.

1. *Wilderneſſes* ſhould always be proportion'd to the Extent of the Gardens in which they are made, that they may correſpond in Magnitude with the other Parts of the Garden; for it is very ridiculous to ſee a large *Wilderneſs* planted with tall Trees in a ſmall Spot of Ground; and on the other hand, nothing can be more abſurd than to ſee little paultry Squares, or Quarters of *Wilderneſs*-work in a magnificent large Garden.

2. As to the Situation of *Wilderneſſes*, they ſhould never be placed too near the Habitation, becauſe the great Quantity of Moiſture which is perſpired from the Trees, will cauſe a damp unwholſome Air about the Houſe, which is often of ill Conſequence. Nor ſhould they be ſituated ſo as to obſtruct any diſtant Proſpect of the Country, which ſhould always be preſerved where-ever it can be obtained, there being nothing ſo agreeable to the Mind as an unconfined Proſpect of the adjacent Country. But where the Sight is confined within the Limits of the Garden from its Situation, then there is nothing ſo agreeable to terminate the Proſpect, as a beautiful Scene of the various Kinds of Trees judiciouſly planted; and if it is ſo contrived, that the Termination is planted circularly, with the Concave toward the Sight, it will have a much better Effect than if it end in ſtrait Lines or Angles, which are never ſo agreeable to the Mind.

3. The Plants ſhould always be adapted to the Size of the Plantation; for 'tis very abſurd to ſee tall Trees planted in ſmall Squares of a little Garden; and ſo likewiſe, if in large Deſigns are planted nothing but ſmall Shrubs, it will have a mean Appearance: It ſhould alſo be obſerved, never to plant Ever-greens amongſt deciduous Trees, but always place the Ever-greens in a *Wilderneſs*, or a ſeparate Part of the *Wilderneſs* by themſelves, and that chiefly in Sight, becauſe theſe afford a continual Pleaſure both in Summer and Winter, when in the latter Seaſon, the deciduous Trees do not appear ſo agreeable.

4. The Walks muſt alſo be proportion'd to the Size of the Ground, and not make large Walks in a ſmall *Wilderneſs*, (nor too many Walks tho' ſmaller) whereby the greateſt Part of the Ground is employ'd in Walks: Nor ſhould the grand Walks of a large *Wilderneſs* be too ſmall; both of which are equally faulty. Theſe Walks ſhould not be entered immediately from thoſe of the Pleaſure-Garden, but rather be led into by a ſmall private Walk, which will render it more entertaining: Or if the large Walk be turned in Form of a Serpent, ſo as not to ſhew its whole Extent, the Mind will be better pleaſed than if the Whole were open to the View.

The uſual Method of contriving *Wilderneſſes* is, to divide the whole Compaſs of Ground, either into Squares, Angles, Circles, or other Figures, making the Walks correſpondent to them; planting the Sides of the Walks with Hedges of *Lime, Elm, Hornbeam, &c.* and the Quarters within are planted with various Kinds of Trees promiſcuouſly without Order. But this can by no means be eſteemed a judicious Method, becauſe hereby there will be a great Expence in keeping the Hedges of a large Wilderneſs in good Order, which inſtead of being beautiful, are rather the reverſe; for as theſe Parts of a Garden ſhould, in a great meaſure, be deſigned from Nature, ſo whatever has the ſtiff Appearance of Art, does by no means correſpond therewith. Beſides theſe Hedges are generally train'd up ſo high as to obſtruct the Sight from the Trees in the Quarters, which ought never to be done.

In the next place, the Walks are commonly made to interſect each other in Angles, which alſo ſhews too formal and trite for ſuch Plantations, and are by no means comparable to ſuch Walks as have the Appearance of *Meanders* or *Labyrinths*, where the Eye can't diſcover more than twenty or thirty Yards in Length; and the more theſe Walks are turned, the greater Pleaſure they will afford. Theſe ſhould now and then lead into an open circular Piece of Graſs; in the Center of which may be placed either an *Obelisk, Statue*, or *Fountain*; and if in the Middle Part of the Wilderneſs there be contrived a large Opening, in the Center of which may be erected a Dome or Banqueting Houſe, ſurrounded with a green Plot of Graſs, it will be a conſiderable Addition to the Beauty of the Place.

From the Sides of the Walks and Openings, the Trees ſhould riſe gradually one above another to the Middle of the Quarters, where ſhould always be planted the largeſt growing Trees, ſo that the Heads of all the Trees will appear to the View; but their Stems will be hid from Sight, which will have a vaſtly different Effect from the common Method, where the Trees are planted large and ſmall, without any Order, ſo that many times the largeſt are next the Sight, and ſmall ones behind them, juſt according as it happens; in which manner the ſmall ones, being overhung and ſhaded, do ſeldom thrive well.

But in order to plant a Wilderneſs with Judgment, the uſual Growth of all the different Sorts of Trees ſhould be well conſidered, that each may be placed according to the Magnitude to which they generally grow; otherwiſe, if they are at firſt planted one above another, as before directed, they will not continue to grow in this Order many Years; for ſome Sorts will greatly out-grow the others, and thereby render the Plantation leſs beautiful; but when they are placed according to their uſual manner of growing, they will always continue nearly in the ſame Order, which renders them very entertaining to the Sight.

Theſe Trees ſhould alſo be allow'd a proportionable Diſtance, according to their Growth, and not crowded ſo cloſe as is commonly practis'd, whereby there are four times the Number of Trees planted which need be; and this cloſe planting cauſes them to aſpire to a great Height, but then they want the noble Diffuſion of Branches, which is vaſtly more agreeable to the Sight than a Parcel of thin, taper Stems, with ſcarcely any Heads, as is too often the Caſe in ſome of the largeſt Gardens in *England*, where, inſtead of looking at a noble Parabola of Trees, with their ſpreading globular Heads, a Parcel of naked Stems preſent themſelves to View; and where the Trees are thus crowded they never thrive half ſo well, nor will they continue half ſo long, as thoſe which are allow'd a proper Diſtance; for their Roots running and interfering with each other, do draw the Nouriſhment away faſter than the Ground can ſupply them; which cauſes their Leaves to be ſmall, and, in dry Seaſons, to decay and fall off long before their uſual Time, and thereby renders the Plantation leſs agreeable.

In the Diſtribution of theſe Plantations, in thoſe Parts which are planted with deciduous Trees, may be planted next the Walks or Openings, *Roſes*, *Honeyſuckles*, *Spirea frutex*, and other Kinds of low flowering Shrubs which may be always kept very dwarf, and may be planted pretty cloſe together; and at the Foot of them, near the Sides of the Walks, may be planted *Primroſes*, *Violets*, *Daffodils*, and many other Sorts of Wood Flowers, not in a ſtrait Line, but rather to appear accidental, as in a natural Wood. Behind the firſt Row, of Shrubs ſhould be planted *Syringa's*, *Cytiſus's*, *Althæa frutex*, *Mezerion's*, and other flowering Shrubs of a middle Growth, which may be back'd with *Laburnums*, *Lilacs*, *Gelder Roſes*, and other flowering Shrubs of large Growth; theſe may be back'd with many other Sorts of Trees, riſing gradually to the Middle of the Quarters, from whence they ſhould always ſlope down every Way to the Walks.

By this Diſtribution you will have the Pleaſure of the flowering Shrubs near the Sight, whereby you will be regal'd with their Scent, as you paſs thro' the Walks; which is ſeldom obſerved by thoſe who plant Wilderneſſes: for nothing is more common than to ſee *Roſes*, *Honey-Suckles*, and other ſmall flowering Shrubs, placed in the Middle of large Quarters, under the Dropping and Shade of large Trees, where they ſeldom thrive; and if they do, the Pleaſure of them is loſt, becauſe they are ſecluded from the Sight. If theſe Quarters are ſlightly dug every Winter, it will keep the Ground clean from noxious Weeds, and be a great Benefit to the Trees. And the Expence of doing this, where Labour is cheap, cannot be very conſiderable, unleſs in very great Plantations.

But beſide theſe Grand Walks and Openings (which ſhould always be laid with Turf, and kept well mowed) there ſhould be ſome ſmaller Serpentine Walks through the Middle of the Quarters, where Perſons may retire for Privacy; in which there need be nothing but the Ground of the Place made level and kept hoed to clear it from Weeds, which will be no great Trouble to do with a *Dutch* Hoe, which is broad, and will make great Riddance; and then rake them over to make them handſome. Theſe Walks need not be very broad, but ſhould be turned in ſuch a manner as not to deviate far from the Middle of the Quarter, becauſe there the Trees being largeſt, will afford the ampleſt Shade; ſix or eight Feet will be a ſufficient Width for theſe Walks, in large Quarters; but in ſmall ones, four Feet is full enough. By the Sides of theſe Private Walks may alſo be ſcattered ſome Wood-Flowers and Plants, which, if artfully planted, will have a very good Effect.

In the general Deſign for theſe Wilderneſſes, it ſhould not be ſtudied to make the ſeveral Parts correſpondent, for that is ſo formal and ſtiff, as to be now quite rejected; the greater Diverſity there is in the Diſtribution of theſe Parts, the more Pleaſure they will afford; and ſince, according to this Method of Deſigning and Planting, the different Parts never do preſent themſelves to the ſame View, ſo it is no matter how different they are varied aſunder; that Part of them which is moſt in View from the Houſe or other Parts of the Garden, may be planted with Evergreens; but the other Parts may be planted with deciduous Trees in the foregoing manner.

The Part planted with Evergreens may be diſpos'd in the following manner, *viz.* in the firſt Line next the great Walks, may be placed *Laurus Tinus, Boxes, Spurge Laurel, Juniper, Savin,* and other dwarf Evergreens; behind theſe may be placed *Laurels, Hollies, Arbutus's,* and other Evergreens of a larger Growth; next to theſe may be placed *Alaternus's, Phillyrea's, Yews, Cypreſs's, Virginian Cedars,* and other Trees of the ſame Growth; behind theſe may be planted *Norway* and *Silver Firs,* the *True Pine,* and other Sorts of the like *Growth*; and in the Middle ſhould be planted *Scotch Pines, Pinaſter,* and other of the largeſt growing Evergreens, which will afford a moſt delightful Proſpect, if the different Shades of their Greens are curiouſly intermix'd. And in order to render the Variety greater, there may be many Kinds of hardy Evergreens obtain'd from the North Parts of *America,* as there are already ſome in *England,* which are very fit for this Purpoſe, and are mention'd in different Parts of this Book.

This manner of ſeparating the Evergreens from the deciduous Trees, will not only make a much better Appearance, but alſo cauſe them to thrive far beyond what they uſually do when intermix'd; therefore I ſhould never adviſe any Perſon to plant them promiſcuouſly together.

By what I have ſaid concerning the Planting the Trees in Rows, one behind another, according to their different Growths, I would not have it underſtood, that I mean the placing them in ſtrait Lines, which is too ſtiff and formal for theſe Plantations; all that is intended, is to place the Front Rows of Trees on each Side the Walks, at an equal Diſtance from the Side of the Walks; but the Lines of Trees (eſpecially the three firſt) muſt turn in the ſame manner as the Walks; thoſe behind may be placed after any manner, provided Care be taken to allow each ſufficient Room to grow, and that there may appear no uneven Gaps in the Diſtance of their Heads, but that they may all riſe gradually, ſo as to form a handſome Slope.

In ſmall Gardens, where there is not Room for theſe magnificent Wilderneſſes, there may be ſome riſing Clumps of Evergreens, ſo deſign'd as to make the Ground appear much larger than it is in reality; and if in theſe there are ſome Serpentine Walks well contrived, it will greatly improve the Places, and deceive thoſe who are unacquainted with the Ground, as to its Size. Theſe Clumps or little Quarters of Evergreens ſhould be placed juſt beyond the plain Opening of Graſs before the Houſe, where the Eye will be carried from the plain Surface of Graſs, to the regular Slope of Evergreens, to the great Pleaſure of the Beholder; but if there is a diſtant Proſpect of the adjacent Country from the Houſe, then this ſhould not be obſtructed, but rather a larger Opening allow'd for the View, bounded on each Side with theſe riſing Clumps, which may be extended to half the Compaſs of the Ground: And on the back Part from the Sight, may be planted the ſeveral Kinds of flowering Shrubs, according to their different Growths, which will ſtill add to the Variety. Theſe ſmall Quarters ſhould not be ſurrounded with Hedges for the Reaſons before given for the larger Plantations; nor ſhould they be cut into Angles, or any other ſtudied Figures, but be deſign'd rather in a rural Manner, which is always preferable to the other for theſe Kinds of Plantations.

In Wilderneſſes there is but little Trouble or Expence after their firſt planting, which is an Addition to their Value; the only Labour required, is to mow and roll the large Graſs Walks, and to keep the other Ground Walks free from Weeds. And in the Quarters if the Weeds are hoed down two or three times in a Summer, it will ſtill add to their Neatneſs. The Trees ſhould alſo be pruned to cut out all dead Wood or irregular Branches, where they croſs each other, and juſt to preſerve them within due Bounds; and, as was before obſerved, if the Ground be ſlightly dug between the Trees, it will greatly promote their Vigour. This being the whole Labour of a Wilderneſs, 'tis no Wonder they are ſo generally eſteem'd, eſpecially when we conſider the Pleaſure they afford.

SWEET-WILLIAMS; *vide* Caryophyllus Barbatus.

WILLOW; *vide* Salix.

WILLOW; the French; *vide* Chamænerion.

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X E

XERANTHEMUM; Eternal Flower, *or* Ptarmica; *vulgò*.

The *Characters* are;

It hath a ſcaly Silver-colour'd Flower-cup; the Flower is dry; the Disk conſiſting of many plain Petals, having no Embryo's affixed to them, yet are included in the ſame Empalement with the Florets; the Embryo's afterwards become Seeds, each having a leafy Head.

The *Species* are;

1. XERANTHEMUM; *flore ſimplici, purpureo majore. H. L.* Eternal Flower, *or* Ptarmica, with a large ſingle, purple Flower.

2. XERANTHEMUM; *flore pleno, purpureo, majore. H. L.* Eternal Flower, *or* Ptarmica, with a large double, purple Flower.

3. XERANTHEMUM; *flore ſimplici albo. H. L.* Eternal Flower, *or* Ptarmica, with a ſingle, white Flower.

4. XERANTHEMUM; *flore pleno albo. H. L.* Eternal Flower, *or* Ptarmica, with a double white Flower.

5. XERANTHEMUM; *flore ſimplici, purpureo, minore. Tourn.* Eternal Flower, *or* Ptarmica, with a leſſer, ſingle, purple Flower.

6. **Xeranthemum**; *flore purpureo, ſimplici minimo, ſemine maximo. H. L.* Eternal Flower, *or* Ptarmica, with a very ſmall, ſingle, purple Flower, and a large Seed.

Theſe Flowers were formerly much more cultivated in the *Engliſh* Gardens than at preſent, eſpecially the two Sorts with double Flowers, which the Gardeners near *London* did cultivate in great Plenty for their Flowers, which they brought to Market in the Winter Seaſon, to ſet in Glaſſes in Rooms, to ſupply the Place of other Flowers, which are not eaſy to be procured at that Seaſon; for theſe being gather'd when they are fully blown, and carefully dry'd, will continue freſh and beautiful many Months: But as there are no other Colours in theſe Flowers but White and Purple, ſo the Gardeners had a Method of dipping them into various Tinctures, ſo as to have ſome of a fine Blue, others Scarlet, and ſome Red, which made a pretty Variety; and if they were rightly ſtain'd, and afterwards hung up till they were thorough dry, they would continue their Colours as long as the Flowers endur'd.

All theſe Sorts are propagated by Seeds; which ſhould be ſown on a warm Border in *Auguſt*, obſerving to water and ſhade the Ground, if the Seaſon proves warm and dry, until the Plants are come up; after which they muſt be kept clear from Weeds, and in dry Weather ſhould be now and then refreſh'd with Water. When the Plants are about two Inches high, they ſhould be prick'd out into another Border under a warm Wall, Pale or Hedge, at about four or five Inches Diſtance from each other. In this Place, the Plants will endure the Cold of our ordinary Winters extreamly well; and in the Spring, will require no farther Care but to keep them clear from Weeds; for they may remain in the ſame Place for good. In *June* they will begin to flower, and the Beginning of *July* they will be fit to gather for drying: But a few of the beſt and moſt double Flowers of each kind ſhould be ſuffer'd to remain for Seed, which in about a Month's Time will be ripe, and the Plants will periſh ſoon after, ſo that the Seeds muſt be annually ſown in order to preſerve them.

The Seeds of theſe Plants are many times ſown in the Spring, but they ſeldom grow ſo well at that Seaſon, nor will the Plants grow near ſo large, or produce near the ſame Quantity of Flowers as thoſe which are ſown in Autumn, for which Reaſons that Time ſhould be preferr'd. Beſides, it often happens, that the Plants which do come up of the Spring-ſowing, do rarely produce good Seeds, unleſs the Seaſon proves very favourable.

XIPHION; Bulbous Iris, *or Flower-de-Luce.*

The *Characters* are;

It hath a Lily Flower, conſiſting of one Leaf, and ſhap'd exactly like that of the common Iris: *the Pointal is furniſh'd with three Leaves, but the Empalement turns to a Fruit, ſhap'd like that of the common* Iris, *and the Root is bulbous, or conſiſts of many Coats.*

The *Species* are;

1. **Xiphion**; *Perſicum, præcox, flore variegato. Tourn.* Early Perſian bulbous Flower-de-Luce, with a variegated Flower.

2. **Xiphion**; *anguſtifolium, flore albo, labio inferiori rictus aureo. Boerh. Ind.* Narrow-leav'd bulbous Iris, with a white Flower, and the

lower Part of the Lip of a yellow Colour.

3. Xiphion; *anguſtifolium, cæruleo-violaceum, non odorum. Boerh. Ind.* Common narrow-leav'd bulbous Iris, with a blue, violet-colour'd Flower without Scent.

4. Xiphion; *anguſtifolium, flore luteo inodore. Tourn.* Narrow-leav'd bulbous Iris, with a yellow Flower without Scent.

5. Xiphion; *anguſtifolium, flore ex violaceo purpureo & cæruleo palleſcente variegato, notata. Boerh. Ind.* Narrow-leav'd bulbous Iris, with a Violet purple and pale Blue variegated Flower.

6. Xiphion; *anguſtifolium, petalis repandis albis, erectis dilutè cæruleis, incumbentibus pallidè cæruleſcentibus. Boerh. Ind.* Narrow-leav'd, bulbous Iris, whoſe Flower hath white Falls, the upright Leaves of a sky blue, and the under ones of a pale bluiſh Colour.

7. Xiphion; *anguſtifolium, petalis repandis aureis, incumbentibus pallidè flavis, erectis dilutè cæruleis. Boerh. Ind.* Narrow-leav'd bulbous Iris, whoſe Flower hath yellow Falls, and the upright Leaves are of a sky blue Colour.

8. Xiphion; *anguſtifolium, flore majore dilutè cæruleo.* Narrow-leav'd bulbous Iris, with a large sky blue Flower.

9. Xiphion; *anguſtifolium, flore majore, dilute cæruleo, lineis rubris eleganter ſtriato.* Narrow-leav'd bulbous Iris, with a large sky blue Flower, elegantly ſtrip'd with red.

10. Xiphion; *anguſtifolium, flore majore albo.* Narrow-leav'd bulbous Iris, with a large white Flower.

11. Xiphion; *anguſtifolium, flore majore albo, lineis dilute cæruleo, & pictis violaceo diſtincto* Narrow-leav'd bulbous Iris, with a large white Flower, with sky blue Stripes, and ſpotted with Violet.

12. Xiphion; *anguſtifolium, flore majore ſaturatè violaceo.* Narrow-leav'd bulbous Iris, with a large deep violet-colour'd Flower.

13. Xiphion; *anguſtifolium, flore majore petalis repandis dilutè cæruleis, erectis ſaturatè violaceo.* Narrow-leav'd bulbous Iris with a large Flower, whoſe Falls are of a sky blue, but the upright Petals are of a deep Violet Colour.

14. Xiphion; *anguſtifolium, flore majore, dilutè cæruleo, petalis repandis flavis.* Narrow-leav'd bulbous Iris, with a large sky blue Flower with yellow Falls.

15. Xiphion; *anguſtifolium, flore majore, ſaturatius violaceo ſtriis rubris eleganter variegato.* Narrow-leav'd bulbous Iris, with a deep Violet-colour'd Flower, beautifully ſtrip'd with Red.

16. Xiphion; *anguſtifolium, flore majore, petalis repandis dilutè cæruleo, erectis flavo.* Narrow-leav'd bulbous Iris, whoſe Flower hath pale blue Falls, but the upright Leaves are of a yellow Colour.

There are many other Varieties of this Flower, which have been of late Years obtain'd from Seeds: Their Numbers are every Year ſo much increas'd that way, that it would be endleſs to enumerate them all, therefore I ſhall proceed to their Culture; in which I ſhall firſt begin with the Method of raiſing them from Seeds, that being the Way to obtain new Varieties.

Having procur'd a Parcel of Seeds from good Flowers, the Beginning of *September*, you ſhould provide ſome flat Pans or Boxes, which muſt have Holes in their Bottoms to let the Moiſture paſs off: Theſe ſhould be fill'd with freſh, light, ſandy Earth, and the Seeds ſown thereon pretty thick, obſerving to ſcatter them as equally as poſſible; then cover them over about half an Inch thick with the ſame light, freſh Earth, and place the Boxes or Pans where they may have the Morning Sun till eleven of the Clock, and if the Seaſon ſhould prove very dry, they muſt be now and then refreſh'd with Water.

In this Situation they may remain until the Middle of *October*, when they ſhould be remov'd into a more open Poſition, where they may have the full Sun moſt part of the Day; in which Place they muſt abide all the Winter, obſerving to keep them clear from Weeds and Moſs, which at this Seaſon is very apt to ſpread over the Surface of the Earth, in Pots, when they are expos'd to the open Air.

In the Spring the Plants will appear above-ground, when, if the Seaſon is dry, they muſt be now and then refreſh'd with Water, and conſtantly kept clear from Weeds; and as the Seaſon advances, and the Weather becomes warm, they ſhould be again remov'd into their former ſhady Situation, where they may enjoy the Morning Sun only. When the Plants begin to decay (which will be in *June)* they muſt be clear'd from Weeds and dead Leaves, and ſome freſh Earth ſifted over them about half an Inch thick, ſtill ſuffering them to abide in the ſame Situation all the Summer Seaſon; during which time they will require no farther Care, but to keep them clear from Weeds until the Beginning of *October*, when they muſt be again remov'd into the Sun, and the Surface of the Earth lightly taken off, and ſome freſh Earth ſifted over them.

In this Place they muſt remain all the Winter, as before; and in the Spring they muſt be treated as was directed for the former Year.

When the Leaves are decay'd, the Bulbs ſhould be carefully taken up (which may be beſt done by ſifting the Earth through a fine Sieve) and a Bed or two of good, light, freſh Earth ſhould be prepar'd, into which the Bulbs muſt be planted, at about three Inches aſunder each Way, and three Inches deep. Theſe Beds muſt be conſtantly kept clean from Weeds and Moſs, and in the Spring, juſt before the Plants come up, the Surface of the Beds ſhould be ſtirr'd, and ſome freſh Earth ſifted over them about half an Inch thick, which will greatly ſtrengthen the Roots.

During the Spring and Summer they muſt be conſtantly weeded, and at *Michaelmas* the Earth ſhould be again ſtirr'd, and ſome freſh ſifted over the Beds again as before, obſerving in Winter and Spring ſtill to keep the Beds clean, which is the whole Management they will require, and in *June* following the greateſt Part of the Roots will flower; at which time you ſhould carefully look over them, and put down a Stick by all thoſe whoſe Flowers are beautiful. to mark 'em; and ſo ſoon as their Leaves are decay'd, theſe Roots may be taken up to plant in the Flower-Garden amongſt other choice Sorts.

But the Nurſery-beds ſhould ſtill remain, obſerving to keep them clear from Weeds, as alſo to ſift freſh Earth over them, as was before directed; and the following Seaſon, the remaining Part of the Roots which did not flower the laſt Seaſon, will now ſhew their Bloſſoms ſo that you may know which of them are worth preſerving in the Flower-Garden, which ſhould now be mark'd; and when their Leaves are decay'd, they muſt be taken up and planted with the other fine Sorts in an Eaſt-border of light, freſh Earth; but the ordinary Sorts may be intermix'd with other bulbous-rooted Flowers in the large Borders of the Pleaſure-Garden, where, during their Continuance in Flower, they will afford an agreeable Variety.

But after theſe choice Flowers are obtain'd from Seeds, they may be increas'd by Off-ſets as other bulbous Flowers are. Theſe Off-ſets ſhould be planted in a ſeparate Border from the blowing Roots, for one Year, until they have Strength enough to produce Flowers, when they may be plac'd in the Flower-Garden with the old Roots.

Theſe Bulbs need not be taken up oftener than every other Year, which ſhould always be done ſoon after their Leaves decay, otherwiſe they will ſend forth freſh Fibres, when it will be too late to remove them; nor ſhould they be kept long out of the Ground; a Week or Fortnight is full enough; for when they are kept longer, their Bulbs are ſubject to ſhrink, which cauſes their Flowers to be weak the following Year.

The Earth which theſe Flowers thrive beſt in, is, a light, ſandy Loam; and if it be taken from a Paſture Ground, with the Sward, and laid in a Heap until the Graſs is throughly rotted, it will be ſtill better, for theſe Bulbs do not delight in a rich, dunged Soil; nor ſhould they be planted in a Situation where they may be too much expos'd to the Sun, for in ſuch Places their Flowers will continue but a few Days in Beauty, and their Roots are apt to decay; but in an Eaſt Border, where they have the Sun until Eleven of the Clock, they will thrive and flower extreamly well, eſpecially if the Soil be neither too wet or over dry: From the moſt beautiful of theſe Flowers, ſhould be Seeds ſaved, and ſown every Year, which will always furniſh new Varieties, ſome of which will greatly exceed the original Kinds.

The *Perſian Iris* is greatly eſteem'd for the Beauty and extream Sweetneſs of its Flowers, as alſo for its early Appearance in the Spring, it generally being in Perfection in *February* or the Beginning of *March*, according to the Forwardneſs of the Seaſon, at which time there are few other Plants in Beauty.

This may be propagated by Seeds, in the ſame Manner as the other Sorts, but the Boxes in which they are ſown, ſhould be put under a Garden Frame in Winter, to ſhelter them from hard Froſts, becauſe while the Plants are young they are ſomewhat tender: From the Seeds of this Kind, I could never obtain any Varieties, their Flowers being always the ſame.

Theſe Plants are alſo propagated by Off-ſets in the ſame Manner as the other Sorts; but their Roots ſhould not be tranſplanted oftener than every third Year, nor ſhould they be ever kept out of the Ground long, becauſe their Roots will intirely decay in a ſhort time, ſo as not to be recovered again. This Sort was formerly more common in the Gardens near *London* than at preſent, which I ſuppoſe has been occaſioned by the keeping the Roots above Ground too long, which deſtroy'd them.

XYLON; The Cotton Plants.

The *Characters* are;

The Flower conſiſts of one Leaf, cut into ſeveral Segments almoſt to the Bottom, and is of the expanded Bell-ſhape; from the Center riſes a hollow pyramidal Tube, adorned and loaded for the moſt part with Chives; from the Empalement ſhoots up the Pointal fixed like a Nail in the Bottim of the Flower; and of the Tube, which is afterwards changed into a roundiſh Fruit, divided into four or more ſeminal Cells, gaping at the Top, and encloſing Seeds covered over with, and wrapped within that ſoft ductile Wool, commonly known by the Name of Cotton.

The *Species* are;

1. Xylon; *ſive Goſſypium herbaceum. J. B.* Herb *or* Shrubby Cotton.
2. Xylon; *Americanum, præſtantiſſimum, ſemine vireſcente. Ligon.* The moſt Excellent American Cotton, with a greeniſh Seed.
3. Xylon; *ſive Goſſypium, fruteſcens annuum, folio vitis ampliori, quinquifido, Inſulæ Providentiæ. Pluk. Phyt.* Annual Shrubby Cotton of the Iſland of Providence, with a large quinquifid Vine Leaf.
4. Xylon; *arboreum. J. B.* The Tree Cotton.
5. Xylon; *arboreum, flore flavo. Tourn.* Tree Cotton, with a yellow Flower.

There are ſeveral other Varieties of this Plant in the warm Parts of the *Eaſt* and *Weſt Indies*, where they grow in great Plenty, ſome of which have been obſerved by the Curious in Botany; but others have eſcaped their Notice; however, theſe being what I have obſerved growing in the *European* Gardens, I ſhall not trouble the Reader with an Enumeration of the other Varieties.

The firſt Sort here mention'd, is cultivated plentifully in *Candy, Lemnos, Cyprus, Malta, Sicily* and at *Naples*; as alſo between *Jeruſalem* and *Damaſcus*, from whence the *Cotton* is brought annually into theſe Northern Parts of *Europe*. It is ſown upon tilled Grounds in the Spring of the Year, and cut down and reaped in Harveſt, as Corn with us; the Ground muſt be tilled and ſown again the ſucceeding Year, and managed in ſuch Sort, as we do the Tillage for Corn and other Grain: It is an annual Plant, periſhing when it hath perfected its Fruits as many others do.

This *Cotton* is the Wooll which encloſes or wraps up the Seeds, and is contained in a kind of brown Husk or Seed-Veſſel, growing upon this Shrub; for it is from this Sort, that the vaſt Quantities of *Cotton* are taken which furniſh our Parts of the World: It is brought from the Iſlands, where the Natives take great Care of its Culture: There are ſeveral Sorts of *Cotton* ſold, which chiefly differ according to the Countries from whence they come, and the various Preparations made of them; the firſt is the *Cotton* in the Wooll, that is to ſay, that which comes from the Shell, from which only we take the Seed; thoſe *Cottons* come from *Cyprus, Smyrna*, &c. The ſecond, is the *Cotton* in the Yarn, which comes from *Damaſcus*; the *Jeruſalem Cottons* which are called *Bazac's*, are the beſt which are ſold. The ſecond and third Sorts are alſo Annual, theſe are cultivated in the *Weſt-Indies* in great Plenty; but the fourth and fifth Sorts grow in *Egypt*; theſe abide many Years, and often arrive to be Trees of great Magnitude, from which the Inhabitants are annually furniſh'd with great Quantities of *Cotton*. One of theſe Trees has a purpliſh, and the other a yellow Flower, which I believe is the only Difference between them.

All theſe Sorts are preſerved in the Gardens of thoſe who are curious in collecting rare Plants. They are eaſily raiſed from Seeds (which may be obtain'd freſh from the Places of their Growth;) theſe muſt be ſown upon a Hot-bed early in the Spring, and when the Plants come up, they muſt be tranſplanted out each into a ſeparate ſmall Pot, filled with light freſh Earth, and plunged into a moderate Hot-bed of Tanners Bark, obſerving to water and ſhade them until they have taken Root, after which they ſhould have Air and Water in Proportion to the Warmth of the Seaſon, and the Heat of the Bed in which they are placed: For if they are too much drawn, by keeping the Glaſſes cloſe down in the Day-time, they will run up very weak and ſlender, ſo as not to be able to ſupport themſelves, and if they are too much expoſed to the Air, they will not make any Progreſs in their Growth.

When the Plants are ſo far advanced, as to fill the Pots with their Roots, they ſhould be ſhaken out and put into larger Pots, which ſhould be filled with the ſame light freſh Earth, and again plunged into the Hot-bed and managed as before; thus from time to time as the Plants advance, they muſt be removed into larger Pots, and as the Warmth of the Seaſon increaſe, ſo they ſhould have a greater Share of Air; and when they are too tall to continue under the Glaſſes of the Hot-bed Frame, they muſt be removed into the Stove and placed in the Tan-bed, amongſt other tender Exotick Trees and Shrubs; in which Place the annual Sorts will produce their Flowers in Autumn; but they rarely produce Pods in this Country.

The Tree Kinds muſt be continued in this Bark Stove all the Winter, and if they are placed with the *All-ſpice*, *Sea-ſide Grape*, and ſuch other *Weſt-Indian* Trees, obſerving to keep the Air of the Houſe about ten Degrees above the temperate Heat mark'd on Mr. *Fowler*'s Botanical Thermometers, they will thrive very well, provided they are often refreſhed with Water.

XYLON ARBOREUM; *vide* Ceiba.

YE

YEW TREE; *vide* Taxus.

YUCCA; The Indian Yucca; *vulgò*.

The *Characters* are;

It hath the Appearance of an Aloe, *the Leaves ending in a ſharp Point, but will grow in the Habit of a Tree; The Flower conſiſts of one Leaf, which is Bell-ſhap'd, cut into ſix Segments and naked, theſe are produced on long Spikes; the Ovary which is in the Center of the Flower, afterwards becomes a tricapſular Fruit as in the* Aloe.

The *Species* are;

1. YUCCA; *foliis Aloes. C. B. P.* The common *Yucca*.

2. YUCCA; *foliis filamentoſis. Moriſ.* *Yucca* with Threads growing from the Leaves.

3. Yucca; *Arborea.* The Tree *Yucca.*

4. Yucca; *Draconis folio ſerrato. H. Elth. Yucca,* with Leaves like thoſe of the Dragon Tree.

The firſt of theſe Plants is pretty hardy, and when grown ſtrong, will endure the Cold of our ordinary Winters in the open Air very well, provided it be planted on a dry Soil: This commonly produces its Flowers every Year, which grow very ſparſedly on the Stalks, and are leſs beautiful than thoſe of the Tree Sort, which are produced in a long, cloſe Spike, and make a very beautiful Appearance; but theſe do not flower oftener than once in four or five Years, which is always in Autumn, ſo that they never produce any Seeds in this Country.

The threaded Sort is not ſo common as the others in the *Engliſh* Gardens; but as it is a Native of *Virginia,* it might be eaſily procured in Plenty from thence. The fourth Sort hath been raiſed of late Years from Seeds which came from thence, and is now pretty common in *England;* but the Plants are not as yet arrived to Maturity enough to produce Flowers in *England;* ſo that I cannot ſay how they differ from thoſe of the other Sorts.

All theſe Plants are either propagated by Seeds, when obtained from Abroad, or elſe from Off-ſets or Heads taken from the old Plants, after the Manner of *Aloes.*

When they are raiſed from Seeds, they ſhould be ſown in Pots filled with light freſh Earth, and plunged into a moderate Hot-bed, where the Plants will come up in five or ſix Weeks after, and when they are two or three Inches high, they ſhould be tranſplanted each into a ſeparate ſmall Pot filled with light freſh Earth, and plunged into the Hot-bed, where the Plants ſhould have Air and Water in Proportion to the Warmth of the Seaſon, and the Bed in which they are placed.

In *July,* they ſhould be inured by degrees to bear the open Air, into which they muſt be removed, to harden them before Winter, placing them in a well-ſheltered Situation, where they may remain until the Beginning of *October,* when they muſt be removed into the Greenhouſe, where they may be ranged amongſt the hardier Sorts of *Aloes,* and ſhould be treated in the ſame Manner as hath been already directed for them, to which the Reader is deſired to turn for further Inſtructions.

When theſe Plants have acquired Strength, they may be afterwards turned out into a warm Border, where they will endure the Cold of our ordinary Winters very well, eſpecially the two firſt Sorts; and, I believe, the other two Sorts will bear the Cold pretty well, after they are grown ſtrong and woody in their Stems.

The Off-ſets taken from the old Plants ſhould be laid in a dry Place for a Week or ten Days before they are planted, that their Wounds may heal, otherwiſe they will be ſubject to rot with Moiſture.

* * *

Z I

ZINZIBER; Ginger.

The *Characters* are;

The Flower (for the moſt part) conſiſts of five Leaves, which are *ſhap'd ſomewhat like thoſe of the Iris; theſe are produc'd in a Head or Club, each coming out of a ſeparate leafy Scale: The Ovary afterwards becomes a triangular Fruit, having three Cells which contain the Seeds.*

The *Species are*;

1. ZINZIBER; *C. B. P.* The common Ginger.

2. ZINZIBER; *Latifolium*; *Sylveſtre. H. L.* Broad-leav'd wild Ginger, *or* Zerumbeth.

The firſt of theſe Plants is cultivated in the warm Parts of the *Weſt-Indies* in great Plenty, from whence we are annually furniſh'd with the dried Roots for Uſe. The ſecond Sort is moſt common in the *Eaſt-Indies*, tho' it grows wild in ſome Parts of the *Weſt-Indies*; there are ſmall Quantities of this Root brought into *Europe* for medicinal Uſe, but it is never uſed in the Kitchen as the other.

Theſe Plants are preſerved as Curioſities in the Gardens of thoſe who delight in rare Plants: They are both propagated by parting of their Roots; the beſt time for which is in the Spring, before they begin to ſhoot, when each large Root may be divided into ſeveral Parts, obſerving always to preſerve two or three Eyes to each Piece: Theſe ſhould be planted into Pots filled with rich, light Earth, and plunged into a Hot-bed of Tanners Bark, where they muſt be frequently refreſh'd with Water, and in hot Weather the Glaſſes ſhould be rais'd with a Brick, to give them Air in proportion to the Warmth of the Seaſon, and the Heat of the Bed in which they are placed; for when their Leaves are come up, if they are too much drawn, they will grow very tall and weak, and the Roots will make but very indifferent Progreſs. But when they have a due Proportion of Heat, Moiſture, and free Air, their Roots will thrive ſo faſt, as in one Seaſon, from a ſmall Head to ſpread over a large Pot, and ſometimes will produce Flowers in this Country.

But theſe Plants muſt be conſtantly kept in a Hot-bed of Tanners Bark, for they are too tender to endure the open Air in *England*, in the warmeſt Part of Summer; and in Winter they muſt be placed in a Bark Stove: for altho' their Leaves do decay in Autumn, and their Roots ſeem to remain in an unactive State moſt part of the Winter; yet, if they are not preſerved in a very warm Place during that Seaſon, they will entirely rot, as I have more than once obſerved: Nor do theſe Roots abide the Winter ſo well when placed upon Boards in the warmeſt Stove, as when they are plunged in the Bark Bed, tho' they are preſerved in the ſame Degree of Warmth; which I conceive to be owing to the Moiſture of the Bark, which in Fermentation aſcends, and entering the Holes at the Bottom of the Pots, affords an agreeable Nouriſhment to the Roots, preſerving them always plump and full; whereas thoſe in a dry Stove, do often ſhrink for want of Moiſture, and ſo many times decay; for it is not very ſafe to give them much Water after their Leaves are decay'd, becauſe they are very apt to rot with too much Moiſture at that Seaſon.

When their Leaves are decay'd, is the proper Time to take up theſe Roots; but thoſe that are deſign'd to plant again, ſhould not be diſturb'd till the Spring, juſt before they begin to ſhoot; which, as was before obſerved, is the beſt

Time to tranſplant them, becauſe they ſoon after ſend forth their Fibres, which will preſerve them from rotting.

ZIZIPHUS; the Jujube.

The *Characters* are;

The Flower conſiſts of ſeveral Leaves, which are placed circularly, and do expand in Form of a Roſe, out of whoſe Empalement riſes the Pointal, which afterwards becomes an oblong, fleſhy Fruit, ſhap'd like an Olive, including a hard Shell divided into two Cells, each containing an oblong Nut or Kernel.

The *Species* are;

1. Ziziphus; *Dod.* The common manured Jujube.

2. Ziziphus; *Sylveſtris. Tourn.* The wild Jujube.

3. Ziziphus; *quæ Jujube Americana, Spinoſa, Loti Arboris foliis & facie, fructu rotundo parvo dulci. Hort. Beaumont.* Prickly American Jujube, with Leaves like the Nettle Tree, and ſmall, round, ſweet Fruit, commonly called in the Weſt-Indies, Mangoſteen.

4. Ziziphus; *argenteo Zeylanica, ſpinis carens, Walambilla Zeylanenſibus dicta. C. B. P.* Silver-leav'd Jujube of Ceylon without Spines, *commonly called,* Walæmbilla.

The firſt of theſe Plants is cultivated in the Gardens of *Italy*, and the South Parts of *France*, from whence the Fruit was formerly brought into *England* for medicinal Uſe; but of late Years it has been very little uſed in the Shops, ſo that there is rarely any of it brought over at preſent.

In thoſe warm Countries they preſerve the Fruit for the Table in the Winter Seaſon, when few other Kinds are in Perfection, at which Time theſe, and *Services*, and ſome other Sorts, do furniſh their Deſerts.

The Fruit is ſomewhat like a ſmall Plum, but it has not a great Share of Fleſh upon the Stone, but it having an agreeable Flavour, is by ſome Perſons greatly eſteem'd.

The ſecond Sort grows wild in the Hedges in the South of *France*, *Italy*, and *Spain*, but in theſe colder Countries it is preſerved in the Gardens of thoſe who are curious in collecting of the various Kinds of Trees and Shrubs.

Theſe Plants may be propagated by putting their Stones into Pots of freſh, light Earth, ſoon after their Fruits are ripe, and in Winter they ſhould be placed under a common Hot-bed Frame, where they may be ſhelter'd from ſevere Froſt: In the Spring theſe Pots ſhould be plunged into a moderate Hot-bed, which will greatly facilitate the Growth of the Seeds; and when the Plants are come up, they ſhould be inured to the open Air by Degrees, into which they muſt be removed in *June*, placing 'em near the Shelter of a Hedge, and in very dry Weather they muſt be frequently refreſh'd with Water.

In this Situation they may remain until the Beginning of *October*, when they muſt be removed either into the Green-houſe, or placed under a Hot-bed Frame, where they may be defended from Froſt, but ſhould have as much free Air as poſſible in mild Weather.

During the Winter Seaſon they ſhould be now and then refreſh'd with Water; but after their Leaves are fallen (as they always ſhed them in Winter) they muſt not be over-water'd, which would rot the tender Fibres of their Roots, and cauſe the Plants to decay.

In *March*, juſt before the Plants begin to ſhoot, they ſhould be tranſplanted, each into a ſeparate ſmall Pot, filled with freſh, light Earth, and if they are plunged into a moderate Hot-bed, it will greatly promote their taking Root; but in *May* they muſt be inured to the open Air by Degrees, into which they ſhould be ſoon after removed.

Thus theſe Plants ſhould be manag'd while young, during which Time they are tender, but when they are three or four Years old, they may be planted in the full Ground where, if they have a dry Soil, and a warm Situation, they will endure the Cold of our ordinary Winters very well.

Theſe Plants may be alſo propagated by Suckers, which the old ones do many times ſend forth from their Roots, but theſe are ſeldom ſo well rooted as thoſe produced from Seeds, and do ſeldom make ſo good Plants, for which Reaſon they are but rarely propagated that Way.

The third Sort is very common in *Barbados*, *Jamaica*, and the other warm Parts of *America*, from whence I have ſeveral times received the Seeds, which do generally riſe very freely on a Hot-bed; but the Plants being very tender, require the Help of a Bark-bed conſtantly, without which they will not make any Progreſs; and in Winter they muſt be placed in the Bark-Stove, where, if they are frequently refreſh'd with Water, they will thrive extremely well. There are ſeveral Plants of this Kind in the Gardens of the Curious, but I have not obſerved any to produce Flowers as yet.

The fourth Sort was brought into *England* from ſome curious Garden in *Holland* many Years ago; this was raiſ'd in the Gardens of Mynheer *Van Beaumont*, from Seeds, which he receiv'd from *Ceylon*, and ſince hath been communicated to many curious Perſons in *Holland* and *England*. There is no Way as yet found ſucceſsful to propagate this Plant, but from Seeds, which being never produced in theſe cold Countries, and but rarely brought from Abroad, is the Reaſon it is not very common in the *European* Gardens at preſent.

This is preſerved in Pots of light, freſh Earth, and placed in a Stove in Winter, where it may be kept in a moderate Warmth, and muſt be frequently refreſh'd with Water, with which Culture the Plants will thrive very well; but I have not ſeen 'em produce any Flowers as yet in *England*, though there are ſeveral pretty old Trees in the Gardens at *Hampton-Court*.

Omitted under the Article,
FABA; Beans.

There are four Sorts of *Beans* commonly planted in Gardens, *viz.* The ſmall *Lisbon*, the *Spaniſh*, the *Sandwich* and *Windſor Beans*. The firſt and ſecond Sorts are uſually planted in *October* and *November*, under warm Walls or Hedges, to have them early; where, if they ſtand through the Winter, they will produce *Beans* early in the Spring: Or they may be planted cloſe in Beds, in ſome Piece of Ground that is well defended from the *North* and *Eaſt* Winds; and being arch'd over with Hoops or Withies, may be cover'd, in very hard Froſts, with Mats and Straw; and in the Spring theſe Plants may be tranſplanted into warm Borders, by which means your Crop will be ſecur'd from Injuries of Froſt; and if Care be taken in tranſplanting them, not to break their Roots, and alſo to water them, if the Seaſon proves dry, until they have taken freſh Root, they will bear as plentiful a Crop as thoſe which remain'd where they were at firſt planted, with this Difference, that they will be a Fortnight later. The *Lisbon Bean* is chiefly preferr'd to the *Spaniſh*; and the beſt way is to procure freſh Seeds from Abroad, at leaſt every other Year, for they are ſubject to degenerate in a few Years in *England*, not in Goodneſs, but only in their Earlineſs.

The *Sandwich* and *Windſor Beans* are ſeldom planted before *Chriſtmas*, but eſpecially the *Windſor*, which is moſt ſubject to be hurt by Cold of any of the Kinds.

Theſe *Beans* ſhould have an open Expoſure, and require to be planted at a greater Diſtance than the two early Kinds; for if they are planted in ſhady Places, or too cloſe, they will grow to a great Height, but ſeldom produce many *Beans*. The uſual Diſtance for theſe (if in an open Situation) is two Foot and an half Row from Row, and four Inches in the Rows; but if the Place is cloſely ſurrounded with Hedges, Walls, or tall Trees the Diſtance muſt be greater; the Rows ſhould then be three Foot apart, and the *Beans* ſix Inches diſtant in the Rows. The *Sandwich Beans* being hardier than the *Windſor*, are uſually planted about *Chriſtmas*, to ſucceed the forward Crops; and theſe although at preſent but in little Requeſt, yet are very ſerviceable, being plentiful Bearers, and very little inferior either in Size or Goodneſs to the *Windſor*.

In the Middle of *January*, if the Weather is open and good, you may plant your firſt Crop of *Windſor* Beans, which will ſucceed the *Sandwich*, and every three Weeks make a freſh Plantation until the middle of *May*, in order to preſerve a Succeſſion through the Seaſon: Indeed there are ſome People who are very fond of *Beans*, which plant even in *June*, but unleſs the Soil is very ſtrong and moiſt, or the Seaſon proves wet or cold, they ſeldom ſucceed well; for in hot dry Weather (which commonly happens in *July*) the Inſects infeſt theſe Plants very much, and often deſtroy them quite, ſo that I have known large Quarters of *Beans* to dye away without producing one ſingle *Bean*. There are others who adviſe the cutting down of *Beans*, in order to cauſe them to produce freſh Shoots from the Bottom for a late Crop; but this ſeldom anſwers the Trouble, for they are liable to the abovementioned Inconveniencies much more than a freſh planted Crop.

There is an Error very common in moſt Gardners, which I can't help mentioning, that is their planting of *Beans* in the Allies of their *Aſparagus*-Beds, which damages the two outer Rows of the *Aſparagus* much more than the Value of the *Beans*.

For the particular *Species* of *Beans*, ſee under the Article, FABA.

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Bears-breech, *vide* Acanthus
Bears-ear, *vide* Auricula Urſi
Bears-foot, *vide* Helleborus
Ladies Bed-ſtraw, *vide* Gallium
Bee-flower, *vide* Orchis
Beech-tree, *vide* Fagus
Beet, *vide* Beta
Belladona
Bell-flower, *vide* Campanula
Bellis
Bellis Major, *vide* Leucanthemum
Hair Bells, *vide* Hyacinthus
Benjamin-tree, *vide* Arbor Virginiana, *&c.*
Herb Bennet, *vide* Caryophyllata
Benzoin
Berberis
Beta
Betonica
Betonica Pauli, *vide* Veronica
Betonica Aquatica, *vide* Scrophularia
Betony, *vide* Betonica
Star of Bethlehem, *vide* Ornithogalum
Betula
Bidens
Bifolium
Bignonia
Bindweed, *vide* Convolvulus, Smilax, Quamoclit
Bilberry Buſh, *vide* Vitis Idæa
Birch-tree, *vide* Betula
Birds-Eye, *vide* Adonis
Birds-foot Trefoil, *vide* Lotus
Birds-foot, *vide* Ornithopodium
Birthwort, *vide* Ariſtolochia
Biſhops-weed, *vide* Ammi
Biſlingua, *vide* Ruſcus
Biſtorta
Black-thorn, *vide* Prunus
Bladder-nut, *vide* Staphylodendron
Blattaria
Blights
Blood Flower, *vide* Hæmanthus
Blood-wort, *vide* Lapathum
Blue-bottle, *vide* Cyanus
Bontia
Bonus Henricus, *vide* Chenopodium
Boor-cole, *vide* Braſſica
Borrage, *vide* Borrago
Borrago
Botrys, *vide* Chenopodium
Box-tree, *vide* Buxus

Bramble-

Bramble-buſh, *vide* Rubus
Brank Urſin, *vide* Acanthus
St. John's Bread, *vide* Siliqua
Briſtol Flower, *vide* Lychnis
Brocoli, *vide* Braſſica
Brook-lime, *vide* Becabunga
Spaniſh Broom, *vide* Spartium
Green Broom, *vide* Cytiſogeniſta
Broom, *vide* Geniſta, Scoparia
Brunella
Brunſfelſia
Bruſcus, *vide* Ruſcus
Bryony, *vide* Brionia
Bucks-horn, *vide* Coronopus
Buck-wheat, *vide* Fagopyrum
Bugloſs, *vide* Bugloſſum
Viper's Bugloſs, *vide* Echium
Bugle, *vide* Bugula
Bugloſſum
Bulbocaſtanum
Bulbocodium
Bullace-tree, *vide* Prunus
Buphthalmum
Bupleuroides
Beupleurum
Burdock, *vide* Lapathum
Burnet, *vide* Pimpinella
Burſa Paſtoris
Butcher's Broom, *vide* Ruſcus
Butter Burr, *vide* Petaſitis
Butomus
Buxus

C

Cabbage, *vide* Braſſica
Sea Cabbage, *vide* Crambe
Cabinet
Cacalianthemum
Cajou, *vide* Acajou
Caſhew Nut, *vide* Acajou
Calabaſh-tree, *vide* Cucurbitifera Arbor
Calamint, *vide* Calamintha
Calamintha
Water Calamint, *vide* Mentha
Calceolus
Caltha
Caltha Paluſtris, *vide* Populago
Calve's Snout, *vide* Antirrhinum
Camara
Cammock, *vide* Anonis
Camomile, *vide* Chamæmelum
Campanula
Camphire, *vide* Camphora
Camphora
Campion, *vide* Lychnis
Candle-berry-tree, *vide* Gale
Candy-tuff, *vide* Thlaſpi
Cannabis
Canna Indica, *vide* Cannacorus
Candy Carrot, *vide* Myrrhis
Canterbury Bells, *vide* Campanula
Capers, *vide* Capparis
Capnoides
Capnorchis
Bean Caper, *vide* Fabago
Caprifolium
Capſicum
Caracalla, *vide* Phaſeolus
Caraway, *vide* Carui
Cardamindum, *vide* Acriviola
Cardamine
Cardiaca
Cardinals Flower, *vide* Rapuntium
Carduus
Carduus Benedictus, *vide* Cnicus
Carduus Fullonum, *vide* Dipſacus
Carnation, *vide* Caryophillus
Spaniſh Carnation, *vide* Poinciana
Carob, *vide* Siliqua
Carrot, *vide* Daucus
Deadly Carrot, *vide* Thapſia
Candy Carrot, *vide* Myrrhis
Carui
Caryophyllata
Caryophyllus
Caſſia
Caſſida
Caſſidony, *vide* Stæchas
Mountain Caſſidony, *vide* Elichryſum
Caſſine
Caſſioberry Buſh, *vide* Caſſine
Caſtanea
Caſtanea Equina, *vide* Hippocaſtanum
Catanance
Cataputia Major, *vide* Ricinus
Cataputia Minor, *vide* Tithymalus

Catch-fly, *vide* Lychnis
Cats-foot, *vide* Elichryſum
Cat-mint, *vide* Cataria
Caucalis
Cedar of Bermudas, *vide* Juniperus
Cedar of Carolina, *vide* Juniperus
Cedar of Virginia, *vide* Juniperus
Cedar of Lebanon, *vide* Cedrus Libani
Cedrus Baccifera
Ceiba
Celandine, *vide* Chelidonum
Greater Celandine, *vide* Chelidonum Majus
Leſſer Celandine, *vide* Chelidonum Minus
Celaſtrus, *vide* Alaternus
Celery, *vide* Apium
Celtis
Great Centaury, *vide* Centaurium Majus
Leſſer Centaury, *vide* Centaurium Minus
Centinodium
Cepa
Ceraſus
Ceratia, *vide* Siliqua Edulis
Cerefolium, *vide* Chærefolium
Cereus
Cerinthe
Ceterach, *vide* Aſplenium
Chærophyllum
Chamæceraſus
Chamæciſtus, *vide* Helianthemum
Chamæclema
Chamæcypariſſus, *vide* Santolina
Chamædaphne, *vide* Ruſcus
Chamædrys
Chamælea, *vide* Thymelea
Chamælea Tricoccos
Chamæmelum
Chamæmeſpilus, *vide* Meſpilus
Chamæmorus
Chamænerion
Chamæpitys
Chamæriphes, *vide* Palma
Chamærubus, *vide* Rubus
Chamæſcye, *vide* Tithymalus
Chardon, *vide* Cinara
Chaſte-tree, *vide* Vitex
Cheeſe Runnet, *vide* Gallium
Chelidonum Majus
Chelidonum Minus
Chelone
Chenopodia-Morus
Chenopodium
Cherry-tree, *vide* Ceraſus
Cherry Laurel, *vide* Lauro-Ceraſus
Cherry Bay, *vide* Lauro-Ceraſus
Berbados Cherry, *vide* Malpighia
Winter Cherry, *vide* Alkekengi
Chervil, *vide* Chærophyllum
Great Chervil, *vide* Myrrhis
Cheſnut, *vide* Caſtanea
Horſe Cheſnut, *vide* Hippocaſtanum
Scarlet flowering Horſe Cheſnut, *vide* Pavia
Chiches, *vide* Cicer
Chickling Vetch, *vide* Clymenum & Lathyrus
Chondrilla
Chriſtmas Flower, *vide* Helleborus
Chriſts-Thorn, *vide* Paliurus
Chriſtophoriana
Herb Chriſtopher, *vide* Chriſtophoriana
Chryſanthemoides Oſteoſpermon
Hard ſeeded Chryſanthmum, *vide* Chryſanthemoides Oſteoſpermon
Chryſanthemum
Chryſoſplenum
Cicer
Cichorium
Cicuta
Cicutaria
Cinara
Cineraria, *vide* Jacobæa
Cinqfoil, *vide* Quinquefolium
Baſtard Cinqfoil }
Shrub Cinqfoil } Pentaphylloides
Circæa
Cirſium
Ciſtus
Dwarf Ciſtus, *vide* Helianthemum
Citron-tree, *vide* Citreum
Citrul, *vide* Pepo
Clary, *vide* Horminum & Sclarea
Clematitis

Climber, *vide* Clematitis
Upright wild Climber, *vide* Clematitis
Clinopodium
Clivers, *vide* Aparine
Clymenum
Cnicus
Cloud-berries, *vide* Chamæmorus
Coaſt-mary, *vide* Balſamita
Cobnut-tree, *vide* Corylus
Coccigria, *vide* Cotinus Coriaria
Cochlearia
Cock's-Head, *vide* Onobrychis
Cocos, *vide* Palma Nucifera
Codlin-Tree, *vide* Malus
Codlins and Cream, *vide* Chamænerion
Coffee-tree, *vide* Jaſminum
Colchicum
Coleworts, *vide* Braſſica
Colliflower, *vide* Braſſica
Colocynthis
Coloquintida, *vide* Colocynthis
Colts-foot, *vide* Tuſſilago
Columbine, *vide* Aquilegia
Colutea
Podded Colutea Cretica, *vide* Coronilla
Colutea Scorpiodes, *vide* Emerus
Coma Aurea
Commelina
Commeline, *vide* Commelina
Comfrey, *vide* Symphytum
Compoſts
Conſervatory, *vide* Greenhouſe
Conſolida Major, *vide* Symphytum
Conſolida Media, *vide* Bugula
Conſolida Minima, *vide* Bellis
Conſolida Regalis, *vide* Delphinium
Conval Lily, *vide* Lilium Convallium
Convolvulus
Conyza
The Coral-tree, *vide* Corallodendron
Corchorus
Coriander, *vide* Coriandrum
Corindum
Cork-tree, *vide* Suber
Corn-flag, *vide* Gladiolus
Corn-bottle, *vide* Cyanus
Corn-marygold, *vide* Chryſanthemum
Corn-ſallad, *vide* Valerianella
Cornel-tree, *vide* Cornus
Cornus
Cornelian Cherry, *vide* Cornus
Corona Imperialis
Corona Solis
Coronilla
Coronopus
Cortuſa
Corylus
Cotinus Coriara
Cotonea Malus, *vide* Cydonia
Cotoneaſter, *vide* Meſpilus
Cotton Plant, *vide* Xylon
Cotula fœtida, *vide* Chamæmelum fœtidum
Cotton-weed, *vide* Gnaphalium
Cotyledon
Cowſlip, *vide* Primula Veris
Cows Lungwort, *vide* Verbaſcum
Crab-tree, *vide* Malus
Crambe
Cranes-bill, *vide* Geranium
Craſſula, *vide* Anacampſeros
Cratægus
Creſs, *vide* Naſturtium
Garden-creſſes, *vide* Naſturtium
Water-creſſes, *vide* Siſymbrium
Indian-creſſes, *vide* Acriviola
Winter-creſs, *vide* Siſymbrium & Barbarea
Crithmum
Chriſta Pavonis, *vide* Poinciniana
Crocus
Croſs-wort, *vide* Cruciata
Crotolaria
Crow-foot, *vide* Ranunculus
Crown Imperial, *vide* Corona Imperialis
Cruciata
Cucubalus
Cuckow Pint, *vide* Arum
Cucumis
Cucumber, *vide* Cucumis
Wild Cucumber, *vide* Elaterium
Cucurbita

Cucurbitifera Arbor
Cud-weed, *vide* Gnaphalium
Cummin, *vide* Cuminum
Wild Cummin, *vide* Cuminoides
Cuminoides
Cuminum
Currant-tree, *vide* Ribes
Cuſtard-apple, *vide* Anona
Cyanus
Cyclamen
Cydonia
Cynogloſſum
Cypreſs-tree, *vide* Cypreſſus
Summer Cypreſs, *vide* Chenopodium
Cyſticapnos
Cytiſo-geniſta
Cytiſus

D

Daffodil, *vide* Narciſſus
Lily Daffodil, *vide* Lilio Narciſſus
Daiſey, *vide* Bellis
Ox-eye Daiſey, *vide* Leucanthemum
Dames Violet, *vide* Heſperis
Dandelion, *vide* Dens Leonis
Danewort, *vide* Sambucus
Date-tree, *vide* Palma
Indian Date-tree, *vide* Guaiacana
Daucus
Daucus Creticus, *vide* Myrrhis
Day-lily, *vide* Liliaſtrum
Dead-nettle, *vide* Lamium
Devil-in-a-buſh, *vide* Nigella
Delphinium
Dens Canis
Dens Leonis
Dentaria
Diapentia, *vide* Sanicula
Dictamnus albus, *vide* Fraxinella
Dictamnus Creticus
Digitalis
Dill, *vide* Anethum
Dipſacus
Diſtaff Thiſtle, *vide* Atractylis
Dittany, *vide* Dictamnus
Baſtard Dittany, *vide* Pſeudo-dictamnus
Dock, *vide* Lapathum
Dog's-bane, *vide* Apocynum
Dog-berry-tree, *vide* Cornus
Dog-wood, *vide* Cornus
Dogs-tooth, *vide* Dens Canis
Doria
Doronicum
Dorycnium
Draco Herba
Draco Arbor, *vide* Palma
Dracunculoides, *vide* Hæmanthus
Dracunculus
Dracunculus Pratenſis, *vide* Ptarmica
Dragon, *vide* Dracunculus
Dragon-wort, *vide* Draco Herba
Drop-wort, *vide* Filipendula
Water Drop-wort, *vide* Oenanthe
Duck's-foot, *vide* Anapodophyllon
Dulcamara, *vide* Solanum
Dungs
Dwarf Laurel, *vide* Thymelia
Dwarf Trees
Dyers Weed, *vide* Luteola

E

Earth
Peas Earth-nut, *vide* Lathyrus
Earwigs
Ebulus ſive Sambucus humilis
Echynomelocactos, *vide* Melocactus
Echinophora
Echinopus
Echinus
Echium
Edera Quinquefolia, *vide* Vitis
Edgings
Elaterium
Elatine, *vide* Linaria
Elichryſum
Elder-tree, *vide* Sambucus
Dwarf Elder, *vide* Sambucus
Marſh Elder, *vide* Opulus
Elm, *vide* Ulmus
Emerus
Empetrum
Enchanters Nightſhade, *vide* Circæa
Endive, *vide* Cichorium
Ephemeron
Epimedium
Equiſetum
Eranthemum, *vide* Adonis

Erica
Erica Baccifera, *vide* Empetrum
Erigeron, *vide* Senecio
Eruca
Erucago
Ervum
Eryngo, *vide* Eryngium
Eryngium
Eryſimum
Eſpaliers
Eternal Flowers, *vide* Xeranthemum, Elichryſum, Amaranthoides
Everlaſting Pea, *vide* Lathyrus
Everlaſting Flower, *vide* Amaranthoides, Xeranthemum, Elichryſum
Euonymus
Eupatorium
Euphorbium

F

Faba
Faba Ægyptiaca, *vide* Aurum Ægyptiacum
Faba Craſſa, *vide* Anacampſeros
Fabago
Fagopyrum
Fagus
Featherfew }
Feaverfew } *vide* Matricaria
Fellwort, *vide* Gentiana
Fences
Fennel, *vide* Fœniculum
Fennel Flower, *vide* Nigella
Hogs-fennel, *vide* Peucedanum
Fennel-giant, *vide* Ferula
Fenugreek, *vide* Fœnum Græcum
Fern, *vide* Filix
Sweet Fern, *vide* Myrrhis
Ferrum Equinum
Ferula
Ficoides
Ficus
Ficus Indica, *vide* Opuntia
Fig-tree, *vide* Ficus
Fig Marygold, *vide* Ficoides
Indian Fig, *vide* Opuntia
Fig-wort, *vide* Scrophularia
Filago, *vide* Gnaphalium
Filbert, *vide* Corylus
Filipendula
Filix
Firr-Tree, *vide* Abies
Flammula Jovis, *vide* Clematitis
Flax, *vide* Linum
Toad-flax, *vide* Linaria
Flea-bane, *vide* Conyza
Flea-wort, *vide* Pſyllium
Fleſh
Flix weed, *vide* Eryſimum
Flos Africanus, *vide* Tagetes
Flos Paſſionis, *vide* Granadilla
Flos Solis, *vide* Corona Solis
Flos Trinitatis, *vide* Viola
Flower
Flower-de-luce, *vide* Iris & Xiphion
Eternal Flower }
Everlaſting Flower } Xeranthemum
Flower-fence, *vide* Poinciana
Fluellin, *vide* Veronica
Fœniculum
Fœnum Burgundiacum, *vide* Medica Sativa
Fœnum Græcum
Fools-ſtones, *vide* Orchis
Fountains
Fox-glove, *vide* Digitalis
Fragaria
Frangula
Fraxinella
Fraxinus
French Marygolds, *vide* Tagetes
Friers Cowl, *vide* Ariſarum
Fritillaria
Fritillaria craſſa, *vide* Aſclepias
Cock's-comb Fritillary, *vide* Aſclepias
Fruits, preſerving, *vide* Pyrus
Frumentum Indicum, *vide* Mayz
Frutex
Frutex Pavonius, *vide* Poinciana
Frutex Virginianus
Fumaria
Fumitory, *vide* Fumaria
Bladder Fumitory, *vide* Capnoides
Indian bulbous-rooted Fumitory, *vide* Capnorchis
Furz, *vide* Geniſta.

G

Gale
Galega
Galeopſis
Gallium
Gardens
Garlick, *vide* Allium
Wild Garlick, *vide* Moly
Gatten-tree, *vide* Cornus
Gelder Roſe, *vide* Opulus
Geniſta Juncea
Geniſta Spinoſa
Geniſtella Tinctoria
Gentian, *vide* Gentiana
Gentianella, *vide* Gentiana
Geranium
Germander, *vide* Chamædrys
Water Germander, *vide* Scordium
Tree Germander, *vide* Teucrium
Geum
Gilder Roſe, *vide* Opulus
Gill-go-by-the-ground, *vide* Chamæclema
Gilliflower, *vide* Caryophyllus
Stock-gilliflower, *vide* Leucoium
Queen's Gilliflower, *vide* Heſperis
Ginger, *vide* Zinziber
Gingidium, *vide* Viſnaga
Gladiolus
Water Gladiole, *vide* Butomus
Glaſtenbury Thorn, *vide* Meſpilus
Glaſs-wort, *vide* Kali
Glaucium
Globe-flower, *vide* Helleboro-ranunculus, *alſo* Cyanus
Globe-thiſtle, *vide* Echinopus
Glycyrrhiza
Gnaphalium
Goats-Rue, *vide* Galega
Goats-Beard, *vide* Tragopogon
Goats Thorn, *vide* Tragacantha
Goldelocks, *vide* Coma aurea
Golden-Rod, *vide* Virga aurea
Gooſe-foot, *vide* Chenopodium
Gooſe-graſs, *vide* Aparine
Gooſeberry, *vide* Groſſularia
Gors, *vide* Geniſta Spinoſa
Goſſipium, *vide* Xylon
Gourd, *vide* Cucurbita
Bitter Gourd, *vide* Colloquintida
Grafting
Oily Grain, *vide* Seſamum
Granadilla
Grape, *vide* Vitis
Grape Hyacinth, *vide* Muſcari
Grape-flower, *vide* Muſcari
Graſs Vetch, *vide* Niſſolia
Vipers-Graſs, *vide* Scorzonera
Gravel
Greenhouſe
Gromil } *vide* Lithoſpermum
Gromwell }
Groſſularia
Ground Ivy, *vide* Chamæclema
Ground-pine, *vide* Chamæpytis
Groundſel, *vide* Senecio
Guajacana
Guaiacum
Guajava
Guidonia
Gum Succory, *vide* Chondrilla

H

Hæmanthus
Halicacabum, *vide* Alkekengi
Halicacabus Peregrina, *vi.* Corindum
Halimus, *vide* Atriplex
Hard-beam, *vide* Carpinus
Harmala
Hair-bells, *vide* Hyacinthus
Hares-ear, *vide* Bupleurum
Harts-horn, *vide* Coronopus
Harts-tongue, *vide* Lingua Cervina
Hawk-weed, *vide* Hieracium
Hawthorn, *vide* Meſpilus
Hazel, *vide* Corylus
Heath, *vide* Erica
Black-berried Heath, *vide* Empetrum
Hedera
Hedera terreſtris, *vide* Chamæciſſus
Hedges
Hedge Muſtard, *vide* Eryſimum
Hedypnois
Hedyſarum
Helianthemum
Heliotropium
Hellebore, *vide* Helleborus
Baſtard Hellebore, *vide* Helleborus
White Hellebore, *vide* Veratrum

Helleborine
Helleborus
Helleborus Albus, *vide* Veratrum
Helmet Flower, *vide* Caſſida
Hemerocallis, *vide* Lilium
Hemlock, *vide* Cicuta
Baſtard Hemlock, *vide* Cicutaria
Hemp, *vide* Cannabis
Hemionitis
Henbane, *vide* Hyoſcyamus
Hepatica
Hepatorium, *vide* Eupatorium
Herba Gerardi, *vide* Angelica ſylveſtris minor
Herba Paris
Hercules All-heal, *vide* Paſtinaca
Hermannia
Hermodactylus, *vide* Colchicum
Herniaria
Heſperis
Hickery, *vide* Juglans
Hieracium
Hig-taper } *vide* Verbaſcum
High-taper
Hippocaſtanum
Hippolapathum, *vide* Lapathum
Hippoſelinum, *vide* Smyrnium
Hirundaria, *vide* Aſclepias
Hogs Fennel, *vide* Peucedanum
Hollow-root, *vide* Fumaria
Hollyhocks, *vide* Malva Roſea
Holly-tree, *vide* Aquifolium
Knee Holly, *vide* Ruſcus
Honey-ſuckle, *vide* Caprifolium
Upright Honeyſuckle, *vide* Chamæceraſus
Trumpet Honeyſuckle, *vide* Peryclymenum
French Honeyſuckle, *vide* Hedyſarum
Honeywort, *vide* Cerinthe
Honey-flower, *vide* Melianthus
Honeſty, *vide* Lunaria
Hops, *vide* Lupulus
Hordeum
Horizontal Shelters
Horminum
Hornbeam, *vide* Carpinus
Horned Poppy, *vide* Glaucium
Horſe-cheſnut, *vide* Hippocaſtanum
Scarlet Flowering Horſe-cheſnut, *vide* Pavia
Horſe-dung
Horſe-mint, *vide* Mentaſtrum
Horſe-radiſh, *vide* Cochlearia
Horſe-tail, *vide* Equiſetum
Horehound, *vide* Marrubium
Water Horehound, *vide* Lycopus
Baſe Hore-hound, *vide* Stachys
Baſtard Horehound, *vide* Marrubiaſtrum
Stinking Horehound, *vide* Ballote
Hoſe-in-hoſe, *vide* Primula veris
Horns and Hedge-hog, *vide* Medica
Hot-beds
Houghing or Hoeing
Hounds-tongue, *vide* Cynogloſſum
Houſleek, *vide* Sedum
Humble Plant, *vide* Mimoſa
Hyacinth, *vide* Hyacinthus
Hyacinthus Tuberoſus
Grape Hyacinth, *vide* Muſcari
Hydrolapathum, *vide* Lapathum
Hydropiper
Hyoſcyamus
Hypericum
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Dwarf Annual Stock, *vide* Heſperis
Stone-crop, *vide* Sedum
Stone-crop-tree, *vide* Vermicularis Frutex
Stoves
Stramonium
Strawberry, *vide* Fragaria
Strawberry-tree, *vide* Arbutus
Strawberry Spinage, *vide* Chenopodio-morus
Styrax
Suber
Succory, *vide* Cichorium
Gum Succory, *vide* Chondrilla
Sugar Cane, *vide* Arundo
Sweet Sultan, *vide* Cyanus
Sumach, *vide* Rhus
Venice Sumach, *vide* Cotinus Coriaria
Little Sun-flower, *vide* Helianthemum
Sun-flower, *vide* Corona Solis
American Sun-flower, *vide* Chryſanthemum Corona Solis
Swallow-wort, *vide* Aſclepias
Sweet-William, *vide* Caryophyllus Barbatus
Sweet-Willow, *vide* Gale
Sycamore, *vide* Acer Majus
Symphytum
Syringa

T

TAgetes
Tamarind-tree, *vide* Tamarindus
Tamariſk-tree, *vide* Tamariſcus
Tamnus
Tanacetum
Tanſey, *vide* Tanacetum
Hig *or* High-taper, *vide* Verbaſcum
Tare, *vide* Vicia
Tarragon, *vide* Draco Herba
Taxus
Teaſel, *vide* Dipſacus
Terebinthus
Teucrium
Thalictrum
Thapſia
South-Sea Thea, *vide* Caſſine
Thiſtle, *vide* Carduus
Diſtaff-thiſtle, *vide* Cnicus
Bleſſed-thiſtle, *vide* Cnicus
Melon-thiſtle, *vide* Melocactos
Sow-thiſtle, *vide* Sonchus
Globe-thiſtle, *vide* Echinopus
Torch-thiſtle, *vide* Cereus
Thlaſpi
Thlaſpidium
Thorn-apple, *vide* Stramonium
Glaſtenbury-Thorn, *vide* Meſpilus
Haw-Thorn, *vide* Meſpilus
Egyptian-Thorn, *vide* Acacia
Chriſt's-Thorn, *vide* Paliurus
Evergreen-Thorn, *vide* Pyracantha
Thrift, *vide* Statice
Thuya

Thyme, *vide* Thymus
Thymelæa
Mother of Thyme, *vide* Serpillum
Hairy wild Thyme, *vide* Serpillum
Lemon Thyme, *vide* Serpillum
Thyme the Marum, *vide* Marum
Thyme the Maſtick, *vide* Maſtichina
Tilia
Tinus
Tithymaloides
Tithymalus
Toad-flax, *vide* Linaria
Tobacco, *vide* Nicotiana
Tower Muſtard, *vide* Turritis
Toxicodendron
Tragacantha
Tragopogon
Tranſportation of Plants
Travellers Joy, *vide* Clematitis
Trefoil, *vide* Trifolium
Birds-foot Trefoil, *vide* Lotus
Shrub Trefoil, *vide* Dorycnium
Bean Trefoil, *vide* Cytiſſus
Moon Trefoil, *vide* Medicago
Snail Trefoil, *vide* Medica Cochleata
Chaſte-Tree, *vide* Vitex
Mealy-Tree, *vide* Viburnum
Cork-Tree, *vide* Suber
Tree Germander, *vide* Teucrium
Trifolium
Tripolium, *vide* Aſter
Triticum
True Love, *vide* Herba Paris
Trumpet Flower, *vide* Bignonia
Trumpet Honey-ſuckle, *vide* Periclymenum
Tuberoſe, *vide* Hyacinthus Tuberoſus
Tulip, *vide* Tulipa
Tulip-tree, *vide* Tulipifera
African Tulip, *vide* Hæmanthus
Turk's Cap, *vide* Lilium flore reflexo
Turkey Wheat, *vide* Mayz
Turkey Balm, *vide* Moldavica
Turnep, *vide* Rapa
French Turnep, *vide* Navew
Turnſole, *vide* Heliotropium
Turritis
Tuſſilago
Tutſan, *vide* Androſæmum
Twa-blade, *vide* Bifolium

V

Vaccaria, *vide* Lychnis
Vaccinia, *vide* Vitis Idæa
Valerian, *vide* Valeriana
Valeriana
Valeriana Græca, *vide* Polemonium
Valerianella
Venus Navel-wort
Veratrum
Verbaſcum
Verbena
Veronica
Vervain, *vide* Verbena
Vetch, *vide* Vicia
Bitter Vetch, *vide* Orobus
Horſe-ſhoe Vetch, *vide* Ferrum Equinum
Liquorice Vetch, *vide* Apios
Chickling Vetch, *vide* Lathyrus
Medick Vetchling, *vide* Onobrychis
Crimſon-graſs Vetch, *vide* Niſſolia
Hatchet Vetch, *vide* Securidica
Viburnum
Vine, *vide* Vitis
Vincetoxicum, *vide* Aſclepias
Viola
Violet, *vide* Viola
Queen *or* Dame's Violet, *vide* Heſperis
Leſſer bulbous Violet, *vide* Narciſſo-Leucoium
Viorna, *vide* Clematitis
Virga Aurea
Virgin's Bower, *vide* Clematitis
Virginian Silk, *vide* Periploca
Virginian Acacia, *vide* Pſeudo-Acacia
Viſcum
Vitex
Vitis
Vitis Idæa
Ulmus
Urtica

W

Widow-wail, *vide* Chamælea
Wake Robin, *vide* Arum
Walks
Walls
Wall-flower, *vide* Leucoium
Walnut, *vide* Juglans
Water
Water Calamint, *vide* Mentha
Water Drop-wort, *vide* Oenanthe
Water Germander, *vide* Scordium
Water Lily, *vide* Nymphæa
Water Pepper, *vide* Perſicaria
Water Horehound, *vide* Lycopus
Way-faring Tree, *vide* Viburnum
Dyers Weed, *vide* Luteola
Yellow Weed, *vide* Luteola
Weld, *vide* Luteola
Wheat, *vide* Triticum
Cow Wheat, *vide* Melampyrum
Indian Wheat, *vide* Mayz
Wilderneſs
Willow-tree, *vide* Salix
Willow Herb, *vide* Chamænerion, *and alſo* Lyſimachia
Sweet-willow, *vide* Gale
Willow-wort, *vide* Salicaria
French Willow, *vide* Chamæneri
Whin, *vide* Geniſta Spinoſa
Petty Whin, *vide* Anonis
Sweet-Williams, *vide* Caryophyllus Barbatus
Wind-flower, *vide* Anemone
Winter Cherry, *vide* Alkekengi
Woad, *vide* Iſatis
Wolf's Bane, *vide* Aconitum
Wood of Life, *vide* Guaiacum
Wood-roof, *vide* Aſperula
Wormwood, *vide* Abſinthium

X

Xeranthemum
Xiphium
Xylon

Y

Yucca

Z

Zinziber
Ziziphus.

FINIS.

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